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THE CHRONICLE
of Higher Education.

ISSN 0009-5982

December 3, 1986 • $1.95
Volume XXXIII, Number 14

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A $6-million shortfall in the National Science Foundation's supercomputer program could financially hamper some university centers. Story on Page 6.

Scientists at Harvard University have retracted a recent finding based on data that were found to have been altered. Story on Page 7.

A new insurance company will provide colleges with liability coverage. Story on Page 15.

Congress's decision to uncap the mandatory retirement age could force colleges to re-examine their tenure policies. Story on Page 15.

Women's groups in higher education are replacing the old boys' network with a "new women's network." Story on Page 15.

Many of the councils Congress created to advise it and the executive branch about education matters are being cut back. Story on Page 22.

The college organizations of both the Democrats and the Republicans found something to cheer about in last month's elections. Story on Page 28.

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DISSATISFACTION WIDESPREAD

Anticipation of Another Round of Big Tuition Hikes Sparks Debate over Why Costs Are Rising So Rapidly

By **JEAN EVANGELAUF**

The flood of 1987-88 college-tuition announcements won't begin until next month, but judging from the trickle so far, they will bear a familiar message for college students and their families:

Costs will be going up again to boost faculty pay, buy computers, upgrade physical plants, and finance student aid.

The price increases have not yet kept students away, but they have sparked intense debate over why tuition has been rising so fast, along with a spate of studies of that question and related issues.

Secretary of Education William J. Bennett weighed in last month with his assertion that "some of our colleges and universities charge what the market will bear." His solution for cost containment: Reduce federal aid to students whose institutions raise prices beyond the inflation rate plus one percentage point (*The Chronicle*, November 29).

'Painfully Costly'

Mr. Bennett's criticisms, coupled with less-than-favorable treatment of academe in the new federal tax code and with polls showing widespread dissatisfaction with the cost and quality of college education, indicate that higher education has lost some of its special status in the eyes of policymakers and the general public. Many people, the Secretary of Education among them, aren't buying the standard arguments for why tuition must rise again.

With college costs outrunning inflation for each of the last six years, the debate has heated up. "College is a painfully costly proposition for all but the wealthiest of families," says Michael O'Keefe, president of the Consortium for the Advancement of Private Higher Education, writing in *Change* magazine. "We should not hypnotize ourselves into thinking otherwise."

Some disagree. "While the price of a college education is rising," says Terry W. Hartle, a researcher with the Ameri-

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Student Strikes and Massive Marches Protest French Government's Education Reforms

By **DAVID DICKSON**

PARIS

A massive protest movement against the Chirac government's education policies has swept across France in the last two weeks.

► Last Thursday a nationwide demonstration was scheduled to be held in Paris and on university campuses throughout the nation in opposition to the conservative government's proposals to reform higher education.

► By midweek a student strike called by some 1,500 delegates throughout the country had been taken up at 11 of the 13 campuses that make up the University of Paris. Elsewhere in France, student strikes were reported to have shut down all classes at eight universities and partially disrupted 10 other institutions, with further strikes planned at three more. Institutions in the provinces of Lyons, Grenoble, Montpellier were heavily affected.

► Several days earlier in Paris, an estimated 200,000 people took part in a march organized by the nation's largest teachers' union, the Fédération d'Education Nationale, to protest plans for greater selectivity in the universities and reduced government subsidies in many areas. The marchers included leaders of the Socialist Party and other political groups, and President François Mitterrand lent his support to the drive.

The student strikers sought to block reforms proposed by the government minister responsible for higher education and research, Alain Devaquet. The students'

Continued on Page 38, Column 3

Big Business Helps Bail Out the Bowls

Faced with declining television fees, college football's post-season bowls are turning to big business. Above, the logo of the Sunkist Fiesta Bowl. See Page 34.

Utah Colleges to Fire 400, Drop Scores of Programs in $15-Million Cutback

SALT LAKE CITY

Hundreds of jobs and scores of programs at Utah's state colleges and universities will be eliminated as a result of Republican Gov. Norman H. Bangerter's order that all state agencies reduce their annual budgets by 6 per cent for the next fiscal year.

The state's nine public colleges and universities will face a $15.4-million reduction, according to calculations made by the Board of Regents last month.

More than 400 people, including faculty and staff members and administrators, are scheduled to lose their jobs, and programs that are not considered "high priority" will be eliminated.

Each of the state's public colleges and universities will have its state funds reduced by 6 per cent and will decide what positions and programs to eliminate.

State revenue in Utah has been declining in recent years because of problems facing agriculture and mining.

20 Years After Protests, Tom Hayden Is Still Trying to Change Universities

By **SCOTT JASCHIK**

SANTA MONICA, CAL.

Twenty years ago, Tom Hayden used bullhorns and marches to get the attention of college presidents.

These days, he doesn't need to shout.

The former campus radical and founder of Students for a Democratic Society is now chairman of the California Assembly's Subcommittee on Higher Education. That means Mr. Hayden has easy access to the state's top academic leaders. They don't always follow his advice, but they do have to care about his opinions and court his good will.

Mr. Hayden, who was re-elected to the Assembly this month, still talks about many of the same issues he addressed in the 1960's: student rights, affirmative action, and the social responsibilities of universities. But he acknowledges that his perspective on higher education and how to improve it has changed.

In an interview at his home here, he discussed those changes, the relevance of his protest experiences to his current work, and his goals for California's colleges and universities.

Mr. Hayden says he has more respect for universities than he once did, in part because he has not been impressed by the other institutions in society. "When I was in the university," he says, "it was my whole world and I was impelled by the conflict between the university ideal and the university reality. If my university did not stand for justice and freedom, then that was my whole society and I had to do something about it."

Since his days as a student at the University of Michigan, Mr. Hayden says, his "world" has expanded. "And the university, relatively speaking, is the vital center of creating an open atmosphere in a society in which there are many forces that are repressive, intolerant, and small-minded."

Universities and politicians have also

Continued on Page 21, Column 1

Debate over College Costs Spreads

Continued from Page 1

can Enterprise Institute, "the vast majority of families with children in college do not face an appreciably higher burden relative to income than they did five years ago."

Dennis Jones, president of the National Center for Higher Education Management Systems, observes that opinion about who should pay for college has shifted dramatically. "In 1960, there was the expectation that the parents pay for college," he says. "In 1980, the expectation was that they would not pay."

The pendulum is swinging back to parents, Mr. Jones says, and they aren't happy about it. "Going back is painful."

Even with the cost increases, overall enrollments haven't suffered. Despite a 12-per-cent drop in the number of high-school graduates from 1980 to 1985, undergraduate enrollment has ranged from 9.4 million to 9.7 million over the last five years, and total enrollment has topped 12 million.

Not All Rates Are High

One reason for that performance is that the public increasingly believes it's necessary to have a college degree to succeed. Says Dena G. Stoner, an economist with the Congressional Joint Economic Committee: "If you look at the data on who won and who lost in terms of real income between 1984 and 1985, only those with four or more years of a college education came out ahead."

Another reason that enrollments are stable is that college is less costly than many people think. The highly publicized charges of the nation's most selective private colleges and universities can be deceptive; most private institutions do not charge $10,000 or more for tuition, and most students do not attend private colleges, anyway.

For instance, figures from the College Board and the Department of Education show that:

► At public four-year colleges, which enroll 42.2 per cent of all undergraduates, this year's average tuition is $1,337.

► At public two-year colleges, which enroll 36.9 per cent of all undergraduates, tuition is $663.

► At private four-year institutions, which enroll 18.3 per cent of all undergraduates, tuition is $5,793.

► At private two-year colleges, which enroll 2.6 per cent of all undergraduates, tuition is $3,910.

In addition to those charges, students will pay, on average, about $2,800 for room and board, $400 for books and supplies, $700 for personal expenses, and $400 for transportation. Students who live at home and commute to a campus can save about $1,200, according to the College Board, which annually surveys institutions of higher education about their charges.

Katharine H. Hanson, executive director of the Consortium on Financing Higher Education, a group of 30 private, expensive colleges that are often singled out for criticism for leading the cost spiral, denies that her members are setting tuition thoughtlessly. It's an "agonizing" process, she says, as they try to balance the desire to keep costs down with the need to raise faculty pay to prevent their professors from being tempted by other job offers.

"More than one COFHE institution has come pretty damn close to a red bottom line," she adds.

At even the most expensive colleges, she says, students receive a subsidy, since tuition does not cover the full cost of education but is supplemented by charitable giving and endowment income.

Even determining whether college is a greater financial burden than it used to be is no easy matter. The data are slippery.

Students' Concern

Surveys of freshmen conducted by the Cooperative Institutional Research Program show that, although most students are concerned about college costs, the situation has remained about the same over the last decade.

The proportion of freshmen who said they had no concern about their ability to finance a college education dipped from 37 per cent in 1975 to 35 per cent in 1985. The number expressing some concern rose from 47 per cent to 51 per cent over the period, while the proportion who said they had major concern slipped from 16 per cent to 14 per cent.

Mr. Hartle of the American Enterprise Institute argues that families with college-age children are typically in their peak earning years, have higher-than-average incomes and income growth, and are therefore able to keep pace with rising college costs.

To prove his point he cites Census Bureau figures showing that the median income in 1985 for families with a child in college was $37,355, compared with $22,415 for all families. Mr. Hartle says that for families with an 18- or 19-year-old dependent child in college, the percentage of income required to meet tuition, room, and board costs at public institutions has remained "remarkably stable" since the 1970's. For example, the charges at a public university amounted to 10.3 per cent of income in 1976-77 and 10.7 per cent in 1985-86.

At private institutions, costs have indeed risen faster than the incomes of families with children in college, Mr. Hartle says, but he notes that only 20 per cent of students attend such institutions.

He analyzes the figures for families with children in college because he says median family income encompasses those for whom college costs are not an issue, such as the elderly. Comparing college costs with the median income for all families or with the incomes of families with a dependent 18-year-old not in college reveals that they have increased as a percentage of income, he says.

Mr. Hartle admits that his analysis is not entirely rosy. Not all students are teen-age dependents, and his reassuring news probably does not apply to non-traditional students. In addition, the figures do not show if students have changed their college plans on the basis of cost, or decided not to go at all.

Bruce M. Carnes, Deputy Under Secretary of Education, believes that an important element is missing from Mr. Hartle's analysis: More wives are working, and that's what has held up family income. "Soon," he says, "you're going to run out of people to put to work to raise that family income."

While people may be managing now, they're concerned about what the future may hold.

A nationwide opinion poll conducted last year showed that three-quarters of the public believed costs were rising so quickly that college would be out of reach for the average American.

"There's still some elasticity in pricing because tuition has not yet eaten all of the family's discretionary income," Mr. Carnes says. "So, often, colleges can continue to jack up their prices."

"At some point prices are going to hit the ceiling," he warns.

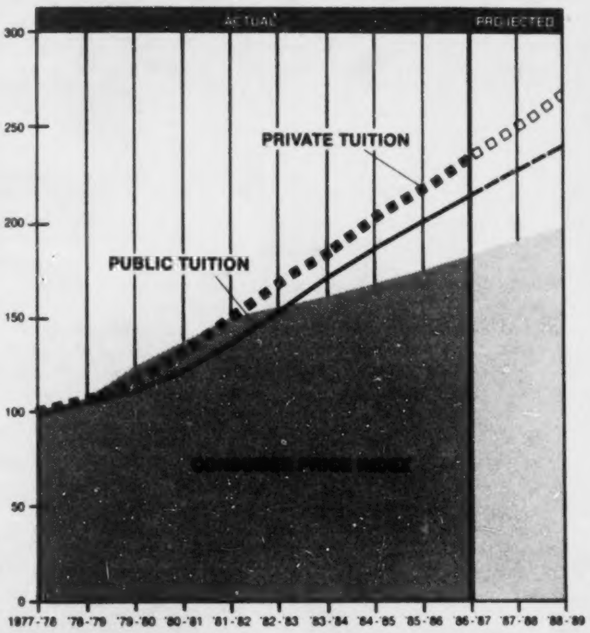
Mr. Carnes says he has a personal interest in the matter. He wife has returned to college, and her tuition rose 9 per cent this year while his income remained the same. He worries about how to pay the bills for his children. "I'm way above the median income," he says, "but my sense is that it's going to be very tough. My sense is that it will be worse, not better, not even staying the same."

The unknown in the cost equation is at what point parents will resist. A few colleges are reaching that point. Waldorf College, for example, has rolled back its charges in an effort to bolster sagging enrollments. And a growing number of colleges are, in effect, selling insurance against increases. By paying a $160 fee, parents of freshmen at Nichols College are guaranteed four years of tuition at the first-year rate.

Basis for College Selection

So far, undergraduates aren't selecting a college primarily on cost. The Cooperative Institution Research Program's freshman survey shows that the majority of those polled both in 1985 and in 1975 said they had chosen their particular college because of its academic reputation or because it would help them get a job, not because it was inexpensive or offered financial assistance.

College Costs and Inflation



SOURCE: AMERICAN COUNCIL ON EDUCATION

CHRONICLE CHART BY JOJO GRAGASIN JR.

But many fear that costs are unduly governing students' choices. They worry that students are selecting majors that will lead to lucrative careers because they're afraid they wouldn't otherwise be able to repay their loans. In addition, they're concerned that costs may lead some students, particularly those in minority groups, to drop out before completing their degrees or not even consider attending college at all.

To answer questions such as those, and to examine anew the whole question of paying for college, a host of studies are in the works:

► Congress, in reauthorizing the Higher Education Act, required the creation of a National Commission on Responsibilities in Financing Postsecondary Education to identify the role of families, students, colleges, and the government in paying students' college costs.

► The American Council on Education has created a 32-member Commission on National Challenges in Higher Education to develop a national plan to deal with rising college costs. In announcing the effort, Robert H. Atwell, president of the council, said the erosion of federal financial and moral support for higher education during the Reagan administration had had "disastrous" consequences for financial aid, access and choice, and affirmative action. The panel, whose chairman is William C. Friday, president emeritus of the University of North Carolina, will issue a report next summer or fall that the A.C.E. hopes will influence the development of party platforms for the 1988 Presidential election.

► The Consortium on Financing Higher Education is sponsoring a study to determine how students in different income groups go about deciding which college to attend. The project is an updating of a 1978 study, which found that among those with strong academic backgrounds, low- and middle-income students were almost as likely to apply to expensive colleges as were their upper-income counterparts.

► The Joint Economic Committee of Congress has commissioned a series of papers on the economic status of young adults. Later this month it will release a report on students' college indebtedness and how it affects their personal and professional decisionmaking.

► The U.S. Department of Education is conducting a comprehensive nationwide survey about student aid and hopes to have results by next year.

Officials in higher education are frank about stating that more increases are in the offing.

While parents and policymakers are concerned about costs, the ever-growing list of reports by blue-ribbon panels critical of higher education demonstrates that they're also worried about quality. Many colleges are responding to the national reports by revamping their curricula and upgrading their student services—efforts that are going to require more money, not less.

A forecast released by the American Council on Education last winter predicted that making the quality improvements called for in the national reports and continuing to restore the purchasing power of faculty salaries to the level of the 1970's would require tuition increases of 6 to 7 per cent over the next few years.

Percentage of Median Income Needed to Pay for College

For all families

	1976-77	1977-78	1978-79	1979-80	1980-81	1981-82	1982-83	1983-84	1984-85	1985-86
Public										
Universities	16.3%	16.0%	15.2%	15.1%	15.3%	16.1%	16.9%	17.4%	17.4%	17.8%
4-year colleges	14.4%	14.2%	13.5%	13.4%	13.7%	14.2%	15.0%	15.7%	15.6%	16.1%
2-year colleges	11.8%	11.7%	11.2%	11.1%	11.4%	11.6%	11.9%	12.1%	12.5%	12.9%
Private										
Selective universities	53.3%	53.4%	51.9%	51.5%	54.7%	58.1%	63.3%	67.7%	67.8%	69.6%
All universities	37.2%	37.1%	35.9%	35.8%	37.1%	39.0%	42.3%	44.6%	45.6%	47.6%
4-year colleges	29.3%	29.2%	28.7%	28.6%	29.6%	31.2%	33.0%	34.7%	34.9%	36.4%
2-year colleges	23.4%	23.2%	22.5%	22.8%	24.2%	25.4%	26.6%	26.7%	26.7%	27.5%

For families with 18- or 19-year-old children in college

	1976-77	1977-78	1978-79	1979-80	1980-81	1981-82	1982-83	1983-84	1984-85	1985-86
Public										
Universities	10.3%	10.2%	10.0%	10.2%	9.8%	9.9%	10.5%	10.4%	10.4%	10.7%
4-year colleges	9.1%	9.0%	8.8%	9.1%	8.7%	8.7%	9.4%	9.4%	9.4%	9.7%
2-year colleges	7.5%	7.4%	7.4%	7.5%	7.3%	7.2%	7.4%	7.3%	7.5%	7.7%
Private										
Selective universities	33.8%	33.9%	34.0%	34.9%	35.0%	35.8%	39.6%	40.6%	40.7%	41.8%
All universities	23.6%	23.5%	23.5%	24.3%	23.7%	24.0%	26.4%	26.8%	27.4%	28.6%
4-year colleges	18.6%	18.6%	18.8%	19.4%	19.0%	19.2%	20.6%	20.8%	21.0%	21.8%
2-year colleges	14.9%	14.7%	14.7%	15.5%	15.5%	15.6%	16.6%	16.0%	16.0%	16.5%

SOURCE: TERRY W. HARTLE, AMERICAN ENTERPRISE INSTITUTE

Sidelines

Just before the kickoff of the football game between the University of Oklahoma and the University of Nebraska, five players from each team joined hands at midfield, dropped to their knees, and bowed their heads. They remained there for a few moments; then the game began.

The significance of their act may have been lost on many fans in the stands and most in the national television audience, but Dick DeVenzio, for one, was thrilled.

Mr. DeVenzio, a former Duke University basketball player and head of the Revenue Producing Major College Players Association, is trying to form a union for major-college athletes. He argues that colleges that make large sums of money from sports should share their revenues with the athletes who work for them.

He supports lifetime scholarships so athletes can return to college at any time to earn their degrees, and thinks athletes should be given spending money so they needn't turn to boosters to make ends meet.

Mr. DeVenzio is not a popular man in the college sports establishment. He became even less popular when he asked all of the Nebraska and Oklahoma players to delay the start of their game by 30 minutes as a show of solidarity among college athletes.

The sit-down strike didn't come off, although players on both teams reportedly considered it. But the pre-game kneel-down did, and for Mr. DeVenzio, who watched from the sidelines, the small display was enough.

"I knew it was difficult for them to make a statement like that," he said. "The interest that was stirred by the controversy, the new attention that was focused on the issues, absolutely confirms my belief that the attempt was worth it. This is a major step forward for us."

•

College athletes are not supposed to promote products, so when *Sports Illustrated* asked to photograph Brian Kasbar, Yale University basketball player, holding a copy of the book he edited with a fellow undergraduate, Boykin Curry, Mr. Kasbar worried about his amateur status.

The book, *Essays that Worked: 50 Essays from Successful Applications to the Nation's Top Colleges*, is selling well enough for the magazine to want to take note of an athlete as entrepreneur. But Mr. Kasbar, aware that several players had run afoul of N.C.A.A. rules that put athletes' eligibility at risk if they use their names or pictures to promote a commercial product, decided he'd better check with the N.C.A.A. before publication.

Eligibility officials at the N.C.A.A. gave Mr. Kasbar a go-ahead, they said, because the book is not connected to his status as a basketball player.

The story, complete with Mr. Kasbar's photo, ran in *Sports Illustrated*'s college-basketball preview issue.

Athletics

Sports Charges Rock Southern Methodist U.: Ill President Quits, Football Ban Threatened

Board orders bar on special admission for players who don't meet normal university standards

DALLAS

Reverberations from new allegations of improprieties in its football program have shaken Southern Methodist University. Among the developments:

► President L. Donald Shields, ill from complications related to diabetes, took early retirement. A spokesman said his resignation was not directly linked to the allegations but added that the scandal had aggravated his health problems and forced him to step down.

► The Board of Governors last week ordered a ban on admitting football players who do not meet the university's regular standards of admission. University officials said 10 to 15 football players had normally been granted such special admission each year.

► William P. Clements, chairman of the board and Governor-elect of Texas, warned, "If we cannot bring the football program under control and put the emphasis where it belongs, we will abolish the program."

Southern Methodist's football team, which is already on probation from the National Collegiate Athletic Association, came under renewed scrutiny last month when new allegations concerning improper payments to players were published.

One player was suspended from the team after reports alleged that a Dallas businessman had provided him with a rent-free apartment and paid his utility bills. In addition, a former player said university officials had paid him and his mother $52,000, much of it after the university was placed on three years' probation by the N.C.A.A. in 1985.

If the charges are proved, the football team could become the first team barred from competition for two years under N.C.A.A. rules.

The new controversy worsened Mr. Shields's poor health and contributed to his resignation, said Ann Abbas, a university spokesman. Mr. Shields, 50, took more than a month's medical leave this fall and returned to the campus only a day before the newest allegations were revealed.

Action Applauded by Faculty

Mr. Shields, S.M.U.'s president since 1980, said in a statement that advice from his physician made it "imperative" that he resign immediately. He said he regretted "that my health does not permit me to contribute to the solution of the university's current challenges."

Faculty leaders applauded the board's action and Mr. Clements's declaration that the abolition of the football program would be considered. The S.M.U. faculty senate had responded to the newest allegations by condemning "quasi-professional athletics" at the university and calling for an end to athletic scholarships and preferential admissions standards for athletes.

"They gave us a strong statement, stronger than we might have thought or hoped for," said Marshall Terry, an English professor and an active advocate of reform in S.M.U. athletics. "The faculty needs to keep the pressure on and join these positive efforts of the board."

At its special meeting, the Board of Governors announced the formation of two committees, one to investigate the football allegations and the other to "re-examine the role of athletics" at S.M.U.

Mr. Clements also announced that he would step down as the board's chairman in mid-January, when he takes office as Governor. He also announced that William B. Stallcup, a biology professor and S.M.U.'s acting provost, would serve as the university's interim president.

Mr. Shields's tenure at Southern Methodist was marked by dramatic academic and financial improvement but persistent athletic turmoil. During his term of office, the average Scholastic Aptitude Test scores of incoming freshmen increased from 1,020 to 1,102, the number of endowed chairs rose from 26 to 50, and the university's endowment grew from $92-million to $282-million.

But the university was hit with tough N.C.A.A. penalties in 1985 for recruiting violations that took place between 1981 and 1984. It was the sixth time since 1958 that S.M.U. had been put on probation by the N.C.A.A., and the fourth time since 1974.

A new violation now could make Southern Methodist the first victim of the N.C.A.A.'s so-called "death penalty," which would ban football for two years at an institution found guilty of major violations twice within five years.

—DOUGLAS LEDERMAN

Football Bowl Games Leading the Way as Large Corporations

By DOUGLAS LEDERMAN

The Atlanta Chamber of Commerce. The Florida Citrus Commission. John Hancock Mutual Life Insurance Company. Mazda Motors. Sea World, Inc. Sunkist Growers, Inc. United States Fidelity and Guaranty Company.

What does that odd conglomeration of business organizations have in common? They've all joined college football's newest activity: bailing out the post-season bowl games.

Corporate sponsorship of some aspects of college sports is on the way, and the bowl games are blazing the trail. The best current example: Last month's much-publicized bidding war to match two undefeated teams, the University of Miami and Pennsylvania State University, in a bowl game that will probably decide the informal national college football championship.

John Hancock
SUN BOWL

The wheeling and dealing that finally landed that game for the Sunkist Fiesta Bowl was possible only because the companies sponsoring the competing bowls were willing to ante up additional money.

The bowls, however, aren't alone in the quest for corporate sponsors. Although officials of the National Collegiate Athletic Association insist that their organization will never relinquish its hold on college championships—that there will never be, say, a "Chrysler-N.C.A.A. Final Four"—a number of conferences and even the N.C.A.A. itself have enlisted corporations to help support tournaments and other programs.

"Our surveys tell us that most athletic directors have their backs to the wall financially," says John R. Davis, the N.C.A.A.'s president. "Anything that can help college athletics survive, we're all for, and corporate sponsorship can do just that."

Survival isn't yet at stake for the Pacific-10 Conference, but the league has turned to the Goodyear Tire and Rubber Company to help sponsor its men's basketball championship tournament this season, in perhaps the first move of its kind.

Sea World
HOLIDAY
BOWL

"We weren't in dire straits, but all college athletic programs are financially stressed," says Thomas Hansen, the Pacific-10's commissioner. "Goodyear's sponsorship will help us maximize our income and create much more visibility in the [Los Angeles] area. It made a lot of sense for us, and I think we'll see more arrangements like it in the future."

The dollar amount of the agreement has not been disclosed, but Mr. Hansen calls it "significant." Goodyear will buy television time, contribute to the tournament's advertising budgets, sponsor social events, and help defray administrative costs. In return, it gets to attach its name to the prestigious tournament.

The first post-season football game to acquire a corporate sponsor was the Bluebonnet Bowl in 1968. A decade ahead of its time, the Bluebonnet Bowl became the As-

NCAA Moves into Drug Testing: Couriers, Long Waits, No 'Warm-Downs'

By CHARLES S. FARRELL

TUCSON, ARIZ.

Angela Chalmers made sports history of a sort last week.

By winning the National Collegiate Athletic Association's women's cross-country individual championship here last week, Ms. Chalmers, a senior at Northern Arizona University, became the first college athlete to be selected for mandatory drug testing under new association rules.

Athletes at N.C.A.A. championships, some chosen because of their performance and others randomly, must undergo urinalysis to prove that they have not used performance-enhancing drugs (such as anabolic steroids) or street drugs (such as cocaine or marijuana). Athletes who fail the test or refuse to take it will lose their eligibility to compete.

About 3,000 drug tests will be performed on college athletes this academic year at a cost of about $950,000.

Ms. Chalmers, who ran the 5,000-meter course in 16 minutes, 55 seconds, was nonchalant about her place in sports history, preferring instead to talk about her strategy in winning the race. She had been a favorite going into the meet, and "I knew if I pushed, I'd be there at the finish," she said.

40 Are Selected

As soon as she finished the race, Ms. Chalmers, the next 14 finishers, and 5 other runners selected randomly by computer were paired with volunteers who, like bodyguards, escorted them to the drug-testing site. Similarly, 20 male competitors were picked for drug testing.

The volunteers took their places at the finish line shortly before the runners began arriving in both the women's and the men's races. Cries of "Drug couriers over here, drug couriers over here," sounded more like a casting call for the TV show *Miami Vice* than a summons for the volunteers to take their places.

None of the athletes picked for drug testing opposed the idea publicly. Ms. Chalmers said simply, "I think it is a good idea," but added that because she lost body fluids during the race, "I know it will be a long time before I can comply."

No Qualms

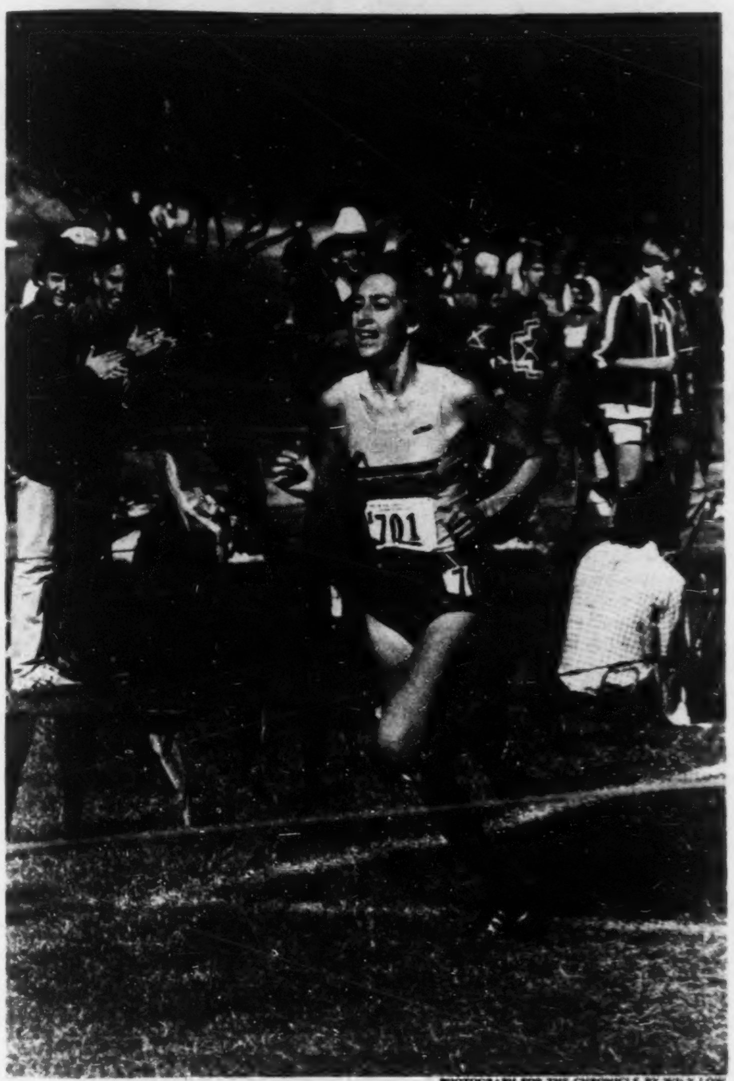
Suzy Favor, a freshman from the University of Wisconsin at Madison who came in second, also voiced support for the new drug-testing plan. Ms. Favor said she had had to submit to such testing in other meets, so she had no qualms about the testing here.

Terry Crawford, coach of the University of Texas at Austin's women's team, which won the title, also backed the testing plan. "I'm in favor of testing," Ms. Crawford said, "and I'm sure all schools across the country have talked about the procedure. I talked with my team last week and just cautioned them, particularly about over-the-counter drugs they might not think about, so they can be aware and protect themselves and not make a mistake and jeopardize their eligibility. But this is a progressive move by the N.C.A.A. to make sure championships are pure and unadulterated."

Ms. Crawford said she was concerned about the hurried nature of the testing. Those selected for testing were allowed little time after the race before they were whisked off for interviews, handed awards, and loaded on a bus for the drug-testing site.

"They weren't allowed time for a warm-down," Ms. Crawford complained. She said that not providing a

Continued on Following Page



PHOTOGRAPH FOR THE CHRONICLE BY WILY LOW

Angela Chalmers of Northern Arizona U. wins the N.C.A.A. women's cross-country championship, thus becoming the first athlete to be selected to take part in the association's new drug-testing program.

Begin to Underwrite College Sports Events; Sunkist Raises Ante to Get Top Game

tro-Bluebonnet Bowl, sponsored by the Houston Astros baseball team, which moved it from Rice Stadium to the Astrodome. The partnership lasted five years, until the Astros were sold to new owners who dissolved the deal.

The old Tangerine Bowl, held in Orlando, Fla., began the most recent trend in 1984, when it received backing and cash from the Florida Citrus Commission and changed its name to the Florida Citrus Bowl.

Five bowls—the Gator, Sugar, Holiday, Peach, and Sun Bowls—took on new sponsors or new names for the games that will be played at the end of this season. Several others have sponsors that haven't required them to change bowl titles, and some are still searching for corporate backers.

Sunkist
Fiesta Bowl™

What does it all mean? The long-term effects of such corporate involvement are unclear, but if last month's spirited fight for the Miami-Penn State game is a bellwether, the impact could be dramatic.

The possibility of a free-for-all for a national championship game took shape when Miami defeated last year's champion, the University of Oklahoma, early in the season.

The presence of Miami and Penn State—both independent of conference ties and with no commitments to play in a specific bowl—in two of the top three spots in the national rankings opened the door for fierce competition among those bowls that do not have contracts with conferences. Three bowls emerged as the primary competitors: the Sunkist Fiesta, the Florida Citrus, and the Gator. A bidding war ensued.

Early last month the Fiesta Bowl offered to increase its payoff from $1.2-million per team to $2.2-million each if Miami and Penn State remained undefeated. The Florida Citrus Bowl responded by offering them $2.6-million each. The Gator Bowl went out in search of a corporate sponsor so that it could compete in the bidding.

After weeks of haggling, the Sunkist Fiesta Bowl won out. It offered Miami $2.4-million and the opportunity to play in prime TV time on Friday evening, January 2. The NBC network was more than willing to move a potentially top-drawing game to prime time from its original slot in the midst of five other games on New Year's Day.

The bidding war for the Miami–Penn State game brought cries of "prostitution" from Cotton Bowl officials, among others. But most bowl people call that talk mostly sour grapes.

"I don't buy most of the 'bidding war' talk," says Jack French, executive secretary of the Pasadena Tournament of Roses Association, which sponsors the Rose

Continued on Following Page

Sponsors and Money for Football's Bowl Games

Bowl	Date	Location	Major corporate sponsor	Est. payment per team
All-American	Dec. 31	Birmingham, Ala.	Russell Corp.	$ 800,000
Aloha	Dec. 27	Honolulu	None	500,000
Bluebonnet	Dec. 31	Houston	None	500,000
California	Dec. 13	Fresno, Cal.	None	150,000
Cotton	Jan. 1	Dallas	None	2,100,000
Florida Citrus	Jan. 1	Orlando, Fla.	Florida Citrus Commission	850,000
Freedom	Dec. 30	Anaheim, Cal.	None	500,000
Gator	Dec. 27	Jacksonville, Fla.	Mazda Motors	1,000,000
Hall of Fame	Dec. 23	Tampa, Fla.	None	800,000
Independence	Dec. 20	Shreveport, La.	None	500,000
John Hancock Sun	Dec. 25	El Paso	John Hancock Life Insurance Co.	850,000
Liberty	Dec. 29	Memphis	None	800,000
New Peach	Dec. 31	Atlanta	Atlanta Chamber of Commerce	625,000
Orange	Jan. 1	Miami	None	2,400,000
Rose	Jan. 1	Pasadena, Cal.	None	6,000,000
Sea World Holiday	Dec. 30	San Diego	Sea World, Inc.	650,000
Sunkist Fiesta	Jan. 2	Tempe, Ariz.	Sunkist Growers, Inc.	2,400,000
USF&G Sugar	Jan. 1	New Orleans	U.S. Fidelity & Guaranty Co.	2,650,000

NCAA Moves into Drug Testing at Championships

Continued from Preceding Page

reasonable recovery time following the grueling race would result in unnecessarily stiff and sore muscles for the competitors.

"I'm concerned that officials reevaluate procedures and come up with better procedures and listen to coaches for input," Ms. Crawford said.

John McDonnell, coach of the men's team from the University of Arkansas, which won the team championship, said that before the meet, his team trainer went over "about 20 pages of materials" that athletes can't ingest because the substances are on the banned list.

"Thank goodness nobody had asthma," Mr. McDonnell said, explaining that many of the banned substances are used for its treatment. Those substances should be allowed simply for the comfort of athletes who might not otherwise be able to compete, he said.

Aaron Ramirez a University of Arizona senior who took first place in the individual men's competition in a time of 30 minutes, 27 seconds over 10,000 meters, said he was a bit concerned about the prospect of drug testing. He was sick a week before the competition, Mr. Ramirez said, and was leery of a remedy prescribed by the team doctor. But the doctor was able to alleviate his fears that he might test positive for drug use, Mr. Ramirez said. "I don't mind taking the test," he added. "It is a good thing to keep drugs away from sports."

The N.C.A.A. received no complaints from any cross-country runner who was picked for drug testing, according to a spokesman, Jim Marchiony, who added that the inaugural testing had gone smoothly.

However, he said, some runners took as long as two hours to provide the 100-milliliter specimen necessary for testing. While waiting, the athletes were permitted to drink as much liquid as they desired, as long as they took nothing that contained caffeine or alcohol.

Results Technically Unofficial

Since it will be a week or two before the test results are known, the results of the cross-country championship are technically unofficial. The N.C.A.A. reserves the right to take 30 days to notify institutions of the results.

Frank Vryasz, assistant director of research for the N.C.A.A. and one of three association officials assigned to the drug-testing program, said he was pleased with the first tests. He added, however, that the drug-testing committee would constantly evaluate the procedures and make needed changes.

According to Mr. Vryasz, the cost of drug testing at the cross-country championship, including extra personnel, totaled about $10,000, or $250 per test.

John L. Toner, athletic director at the University of Connecticut and chairman of the N.C.A.A.'s drug-testing committee, said, "We have a natural obligation at this point because it is being looked at by high schools and other organizations. That's why it has to be fail-safe and first class."

Mr. Toner said he appreciated feedback about improving testing, but suggested that those who wanted to take certain substances off the banned list lacked the experience to determine what should and should not be included.

Between 3,000 and 4,000 drugs are on the continually changing list of banned substances, Mr. Toner said. "We take a position that using any of the banned substances is a violation."

If an athlete tests positive for drug use, the N.C.A.A. will announce only that he or she has been ruled ineligible for competition, according to Mr. Toner. No reason will be given publicly.

Whatever the outcome of the tests from the cross-country championship, Mr. Toner said, "The first time around, we're going to gather a tremendous amount of data."

Corporations Begin to Underwrite College Sports Events

Continued from Preceding Page

Bowl. "The people who didn't like the Miami situation are the people who didn't get a part of it."

The Rose Bowl, the richest of the post-season bowl games, annually features the winners of the Big Ten and Pacific-10 Conferences, and was therefore never in the running for a Miami–Penn State matchup.

Although few see the wooing of Miami and Penn State as a problem, most knowledgeable observers think it does mean that the era of corporate sponsorship in college sports is at hand.

"It's certainly a trend," says Robert Dale Morgan, assistant executive director of the New Peach Bowl, which recently merged with the Atlanta Chamber of Commerce and is actively seeking corporate sponsorship.

"It hasn't become critical for us yet, but we're approaching the day when it will be."

Most bowl officials agree that finances are making corporate sponsorship attractive and often necessary.

"The rights fees that we get from the networks dropped so significantly that we didn't know where to turn," says Jeff Jenkins, associate director of the John Hancock Sun Bowl. "Now, with the new corporate backing, we're able to offer each team $300,000 more than we've ever offered before. '

End of an Era

Kevin Monaghan, a spokesman for NBC, says that the recent $300-million sale of the 1988 Summer Olympic Games to his network signaled the end of an era of skyrocketing TV fees. "That event was expected to sell for as much as a billion dollars, but it fell way short," he says. "Now, rights fees are decreasing across the board, and I think they'll continue to fall."

Some bowl officials blame overexpansion of bowls for the shrinking fees. "It's a question of supply and demand," says Mr. French. "There are a lot of bowls, and it's the American way that some are going to struggle more than others."

As the fees paid to televise the bowls rose during the early 1980's, so did the amount of money that bowls offered to attract teams. The Cotton Bowl payout, for example, rose from just over $1-million in 1978 to more than $2-million in 1985. Now, with TV fees falling, bowl officials are scrambling to find creative ways to maintain those high payments to participants. Corporate sponsorship has often provided the answer.

The Sugar Bowl was the first of the four major New Year's Day bowls to turn to a sponsor, signing a deal with the United States Fidelity and Guaranty Insurance Company. "Our agreement with USF&G has broadened our financial-security base for the future," says Mickey Holmes, executive director of the USF&G Sugar Bowl, as it is now called. "We will stay competitive indefinitely now."

One nagging question facing the bowls and their sponsors is whether the public will accept the name changes. "It's going to come slowly, I think," says Bruce Binkowski, public-relations director for what is now called the Sea World Holiday Bowl. "People are slow to accept some kinds of change, and I think tradition gets in the way. Plus, it's just a mouthful. I have a radio show, and I still stumble on it once in a while."

Ex-Coach at Memphis State Is Indicted on Tax-Evasion, Obstruction Charges

MEMPHIS

Dana Kirk, former Memphis State University men's basketball coach, has been indicted by a federal grand jury here on 11 counts involving tax evasion, filing false income-tax returns, mail fraud, and obstruction of justice.

Mr. Kirk, who was dismissed by Memphis State in September, is charged with under-reporting his income in 1982 and 1983, with failing to report or under-reporting income from summer basketball camps from 1980 through 1983, and with demanding and receiving payments for entering his basketball team in tournaments.

If convicted on all charges, Mr. Kirk could face 62 years in prison and fines of more than $900,000. The most serious charge, obstruction of justice, carries with it a maximum penalty of 10 years in prison or $250,000 in fines.

The indictment did not charge Mr. Kirk with violating any federal gambling laws, despite rumors throughout the investigation that linked him with known Memphis gamblers.

Mr. Kirk was charged with soliciting a $2,000 payment for having Memphis State play in the 1982 Sugar Bowl basketball tournament and with receiving $10,000 for pre-tournament interviews prior to the 1983 Winston Tire holiday tournament in Los Angeles.

Mr. Kirk said he would fight the charges. —D.L.

People in Athletics

Chuck Banker, assistant football coach at Iowa State U., to football coach there.

Tom Borrelli, assistant wrestling coach at Clemson U., to wrestling coach at Lake Superior State College.

Tom Nelson, former newspaper reporter in Wheaton, Ill., to sports-information director at Aurora U.

Rian Groseth, assistant men's and women's swimming and diving coach at U. of Wisconsin at River Falls, to men's and women's swimming and diving coach at Macalester College.

Sheryl Stewart, former sports-information director at Ohio U., to sports information director at Loyola College (Md.).

A. L. Williams, head football coach at Louisiana Tech U., has resigned.

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THE CHRONICLE
of Higher Education.

December 10, 1986 • $1.95
Volume XXXIII, Number 15

ISSN 0009-5982

News Summary

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Savvy public-relations aides have helped Education Secretary William J. Bennett turn his image around. Story on Page 16.

Though tiny, the 19-member League for Innovation in the Community College has a big impact. Story on Page 3.

Scientists are beginning to take steps toward determining the sequence of chemical units in the human genome. Story on Page 6.

The intervention of an administrator in a professor's classroom is at the heart of a dispute at Tennessee State University. Story on Page 13.

The president of the University of Alaska has called for a radical reorganization of the state's system of higher education. Story on Page 17.

The assets of the W. K. Kellogg Foundation have more than doubled in two years. Story on Page 23.

The Billings Library at the University of Vermont is one of the masterpieces of American college architecture. Story on Page 26.

New Start is a program that gives potential academic dropouts at the City University of New York just that. Story on Page 29.

A former ice-hockey player has filed a lawsuit challenging the fairness of an obscure N.C.A.A. rule limiting athletic scholarships to one year. Story on Page 34.

Under the Sandinistas, the goal of Nicaragua's universities is to produce as many new professionals as possible. Story on Page 38.

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OPENINGS UP 50 PCT. SINCE 1984

Job Market for Professors in English and Foreign Languages Shows Vigor

By SCOTT HELLER

NEW YORK

The job market for English and foreign-language scholars, long thought comatose if not dead, is showing strong signs of life.

The swarm of applicants who will attend the Modern Language Association convention later this month will find more jobs available than ever.

The association reports a "vast" increase in the number of positions advertised in its *Job Information List* in the last two years.

Since 1984, the available openings have increased by 50 per cent. This October and December, the association listed more advertisements than ever before in its history.

"We are very encouraged," said Phyllis Franklin, executive director of the M.L.A. "I'm willing to take my hat off my head, but it's too soon to throw it up in the air."

In a sharp turnaround, more colleges are advertising for full-time, tenure-track positions in English and the foreign languages, as opposed to lecturers and instructors. Ms. Franklin called this shift "good news for the profession."

But she stopped short of proclaiming an end to the job crisis. "I want to see what next year looks like," she said.

Some Complain About Listings

Indeed, nothing guarantees that the advertised jobs for 1987 will be filled. The M.L.A. listings, while widely read and respected, are also the subject of complaints. Some applicants contend that universities advertise jobs even though "inside" candidates have already been identified.

No matter how rough an indicator, however, the recent developments are a bright spot in a situation long seen as dismal.

In October 1984, colleges and universities listed 499 job openings in foreign languages. This October, the number was 777. In English, the openings have jumped from 567 in 1984 to 868 this year.

In 1975, 434 jobs were listed in English and 373 in foreign languages.

"It's a very vast improvement on a very

Continued on Page 15, Column 1

French Students Reject Prime Minister's Plea and Continue to Protest University Reforms

By DAVID DICKSON

PARIS

University and high-school students throughout France, rejecting a televised appeal by Prime Minister Jacques Chirac, continued massive demonstrations last week against his government's proposals for reforming higher education.

The proposed reforms would give individual universities new authority to set fees and entrance requirements, moves that the protesters said threatened to produce inequality of opportunity and excessive selectivity.

Last Thursday, students by the hundreds of thousands, including many who had come here from other parts of the country, held the largest demonstration yet—an afternoon march on the National Assembly. Some violence was reported.

Protest leaders, pleased with the turnout, claimed to have one million participants, while police estimates put the number at about 200,000. Either way, the government's hopes for an ebbing of support for the student movement clearly were not fulfilled, and rumors circulated that its proposals might be withdrawn.

In the previous week, as student strikes spread throughout France, crowds of demonstrators said to number as many as 500,000 disrupted traffic on the Left Bank for several hours.

The protests, which began in mid-November, persisted last week in spite of an

Continued on Page 43, Column 1

Black South Africans Propose Guidelines for U.S. College Aid

They fear ill-conceived plans could strengthen apartheid

By PAUL DESRUISSEAUX

EAST LANSING, MICH.

Black South African leaders are expressing growing concern about the design of U.S. education programs being planned to benefit their countrymen.

At a time when more and more American colleges are seeking ways to have direct involvement in providing educational opportunities for black South Africans, the leaders warn that some programs have been hastily planned and ill conceived. As a result, they say, those efforts have the potential to strengthen the institutions of apartheid rather than help blacks.

The text of guidelines for U.S. programs to provide education and training for black South Africans appears on Page 40.

Such concerns led some two dozen educational leaders from South Africa and neighboring states, in meetings with American educators and foundation officials here last month, to draft and endorse a set of proposed guidelines for U.S. programs that support the education and training of blacks from their countries.

The guidelines say that assistance from abroad is appreciated and acceptable "provided it is responsive and sensitive to the needs and aspirations of the people as perceived by them" and is not intended to undermine their struggle against apartheid.

Among other things, the guidelines urge support only for projects that will not interfere with opposition to apartheid or with international movements for sanctions and divestment. They call for a ban on support for programs controlled by the government in Pretoria or its agents, including the authorities in the South African tribal homelands, which are often referred to by blacks there as "bantustans."

The proposal also urges institutions that

Continued on Page 40, Column 1

At Clarkson U., Every Student Has a 'Z,' but Computer 'Geeks' Are Few

By JUDITH AXLER TURNER

POTSDAM, N.Y.

The freshman class always includes a few serious "geeks," says Lawrence Carreiro—kids who are so shy that they hide in their rooms with their computers for the first three or four weeks. But after that crisis is over, he says, "you don't find too many people geeking."

Thus Mr. Carreiro lays to rest the first assumption many people make about Clarkson University, an engineering school where every student has a microcomputer: that the place must be full of people who would rather work on their computers than do anything else.

Mr. Carreiro, now a senior, is a member of the first class that was issued computers at Clarkson. Today every undergraduate here has a "Z"—a Zenith microcomputer—and has had one since the first day of freshman orientation. Clarkson gives the computers to the students; the cost is covered by tuition.

"The kids here aren't that much different from the kids on any other campus," says Elizabeth Fouracre, also a senior. "Our conversations are based on our classes, not 'Did you get more memory for your Z?' If some guy came up to me and talked like that, I would have some doubts about him."

As far as Clarkson students are concerned, having a computer hasn't changed college life dramatically. The chief advantage, they say, is convenience. Students don't have to stand in line or wait until 2 a.m. to get to a computer terminal so they can complete a programming assign-

Continued on Page 30, Column 1

Belief in 'Creation Science' Perplexes Researchers

Scientists dispute the argument—to be presented before the Supreme Court this week—that creationism should be taught beside evolution in the schools. Story on Page 6.

NIH Investigates Test of Vaccine in Argentina

WASHINGTON

The National Institutes of Health are trying to determine if the Wistar Institute, a biomedical-research center with close ties to the University of Pennsylvania, violated federal guidelines when it took part in a test of a genetically altered rabies vaccine in Argentina without seeking permission from United States—or Argentine—officials.

The agency has asked Wistar officials to clarify whether or not they used N.I.H. money to help pay for the field test, said Bernard Talbot, an adviser to the N.I.H. director on genetic-engineering issues. That is the crucial issue, Mr. Talbot said.

The N.I.H. requires scientists who receive its support for "projects done abroad" involving genetically engineered products to follow the agency's guidelines, which require prior federal approval for field tests.

Wistar used N.I.H. grant money to develop a genetically altered vaccine for rabies. But Mr. Talbot said there was nothing in Wistar's grant applications or reports to indicate that it used some of the agency's money in the Argentine field test.

Wistar officials told reporters that they did not use any N.I.H. money to pay for the test. One of the officials also said they had understood that the Pan American Health Organization, which actually conducted the test, would take care of making any notifications that were necessary. Argentine authorities halted the field test after they learned about it.

Hilary Koprowski, Wistar's director and a professor of research medicine at the University of Pennsylvania, headed the institute's effort in the Argentine test.

A request from the Foundation on Economic Trends, an organization led by Jeremy Rifkin, a persistent critic of biotechnology, prompted the N.I.H. to investigate the matter. The foundation argued that the term "projects done abroad" in the guidelines referred to any product tested abroad that was developed with N.I.H. money, whether the money supported the actual field test or not.

But Mr. Talbot, who is heading N.I.H.'s inquiry into the matter, said that, as he interprets the guidelines, they cover only foreign field tests actually paid for with N.I.H. money.

—COLLEEN CORDES

Research: Blacks Gain and Lose

Continued from Preceding Page

Mr. Farley, 20 per cent of black men had reached managerial or professional levels in 1982, compared to 6 per cent in 1950. Thirty-two per cent of white men had reached those levels in 1982, he said, a 12-per-cent rise since 1950.

As for income, in 1960 "black women's hourly earnings were 61 per cent of those of white women, but this increased to 98 per cent by 1980, and in 1985 the hourly earnings of black women exceeded those of whites," Mr. Farley wrote. "In the past employed black women worked fewer hours than white women. Black women now report greater hours of employment, and, as a result, the average annual earnings of black women are in excess of those of white women."

FACT-FILE

Sources of University Research Funds

Ranking of institutions that spent more than $30-million in fiscal 1985

	Total	Federal government	State, local government	Industry	Institutional funds	Other
1. Johns Hopkins University	$388,563,000	$367,063,000†	$ 1,333,000	$ 0	$ 4,619,000	$ 15,548,000
2. Massachusetts Institute of Technology	242,966,000	189,935,000‡	283,000	32,007,000	1,763,000	18,978,000
3. University of Wisconsin at Madison	208,425,000	123,989,000	36,961,000	7,217,000	27,682,000	12,576,000
4. Cornell University	203,228,000	118,319,000‡	28,863,000	12,526,000	23,274,000	19,244,000
5. Stanford University	199,185,000	172,423,000‡	374,000	8,044,000	7,347,000	10,997,000
6. University of Minnesota	173,322,000	87,776,000	19,439,000	8,135,000	38,231,000	19,741,000
7. University of Washington	163,962,000	135,830,000	1,523,000	8,887,000	5,265,000	12,457,000
8. University of Michigan	163,713,000	106,147,000	2,272,000	11,677,000	35,434,000	8,183,000
9. University of California at Berkeley	149,900,000	96,779,000‡	2,294,000	0	39,361,000	11,466,000
10. University of California at Los Angeles	149,744,000	109,689,000	836,000	0	19,219,000	20,000,000
11. Texas A&M University	146,381,000	71,346,000	52,240,000	11,731,000	3,636,000	7,428,000
12. University of California at San Diego	145,550,000	115,632,000	642,000	0	14,092,000	15,184,000*
13. University of Illinois at Urbana-Champaign	138,563,000	80,536,000	18,008,000	7,506,000	28,257,000	4,256,000
14. Harvard University	137,853,000*	103,556,000	380,000*	5,410,000*	8,651,000*	19,856,000*
15. Columbia University, main division	136,577,000	120,120,000	1,193,000	4,027,000	2,034,000	9,203,000
16. University of California at San Francisco	131,348,000	95,615,000	2,059,000	0	16,398,000	17,276,000*
17. University of Pennsylvania	130,397,000	92,893,000	572,000	3,685,000	14,062,000	19,185,000
18. University of Texas at Austin	123,337,000	62,462,000	5,302,000	2,136,000	40,743,000	12,694,000
19. University of California at Davis	114,862,000	47,652,000	3,671,000	0	52,476,000	11,063,000
20. Pennsylvania State University	113,196,000	70,099,000	4,258,000	15,715,000	22,620,000	504,000
21. Yale University	107,245,000	88,922,000	2,785,000	1,729,000	12,152,000	1,657,000
22. University of Arizona	105,765,000	51,694,000	1,335,000	9,402,000	38,536,000	4,798,000
23. Ohio State University	103,350,000	53,240,000	12,207,000	7,140,000	17,126,000	13,637,000
24. University of Southern California	97,282,000	76,425,000	739,000	5,361,000	14,024,000	733,000
25. University of Maryland at College Park	96,474,000	39,450,000	27,184,000*	8,532,000*	21,308,000*	0
26. University of Colorado	93,416,000	69,359,000	251,000	2,234,000	12,961,000	8,611,000
27. Michigan State University	92,515,000	46,605,000	18,794,000	2,686,000	21,040,000	3,390,000
28. University of Florida	91,298,000	42,031,000	4,996,000	8,254,000	30,748,000	5,269,000
29. Georgia Institute of Technology	90,445,000	50,349,000	1,194,000	18,730,000	20,172,000	0
30. Louisiana State University	88,953,000	25,492,000	29,292,000	746,000	26,209,000	7,214,000
31. Purdue University	88,886,000	48,542,000	11,282,000	9,583,000	17,617,000	1,862,000
32. University of Rochester	86,650,000	64,064,000‡	4,455,000	6,896,000	5,135,000	6,100,000
33. New York University	83,896,000	60,567,000	609,000	3,742,000	11,618,000	7,360,000
34. University of Georgia	83,548,000	28,403,000	1,590,000	3,729,000	49,337,000	489,000
35. Washington University	80,233,000	61,050,000	369,000	9,617,000	4,203,000	4,994,000
36. University of Chicago	79,929,000	66,950,000‡	1,193,000	1,044,000	5,896,000	4,846,000
37. University of Connecticut	75,155,000	38,944,000	813,000	4,572,000	15,532,000	15,294,000
38. Oregon State University	74,768,000	41,117,000	16,477,000	4,245,000	3,199,000	9,730,000
39. North Carolina State University	74,471,000	22,253,000	2,074,000	8,249,000	38,876,000	3,019,000
40. Northwestern University	72,337,000	42,317,000	311,000	1,690,000	23,110,000	4,909,000
41. University of North Carolina at Chapel Hill	71,844,000	55,746,000	12,330,000*	1,177,000	0	2,591,000
42. Duke University	68,899,000	56,437,000	571,000	5,193,000	2,943,000	3,755,000
43. Iowa State University	67,276,000	16,030,000‡	13,226,000	3,131,000	32,450,000	2,439,000
44. Yeshiva University	66,656,000	55,794,000	0	0	5,902,000	4,960,000
45. California Institute of Technology	65,810,000	56,805,000‡	433,000	2,678,000	3,981,000	1,913,000
46. University of Iowa	64,923,000	48,059,000	160,000	1,556,000	10,273,000	4,875,000
47. University of Pittsburgh	63,796,000	48,714,000	768,000	4,069,000	4,365,000	5,880,000
48. Baylor College of Medicine	63,197,000	41,749,000	0	4,241,000	8,034,000	9,173,000
49. Virginia Polytechnic Institute & State University	60,558,000	25,650,000	19,382,000	6,772,000	8,754,000	0
50. Carnegie Mellon University	60,292,000	37,666,000	3,473,000	11,780,000	1,626,000	5,747,000*
51. Rutgers University	59,392,000	23,947,000	10,506,000	2,108,000	19,914,000*	2,917,000
52. Rockefeller University	59,159,000	30,047,000	499,000	2,861,000	16,444,000	9,308,000
53. University of Miami	58,035,000	32,817,000	559,000	7,892,000	13,204,000	3,563,000
54. State University of New York at Buffalo	57,045,000	42,860,000	640,000	243,000	10,554,000	2,748,000
55. University of Texas System Cancer Center	56,137,000	19,408,000	0	0	25,835,000	10,894,000
56. Indiana University	54,796,000	37,527,000	523,000	2,718,000	9,631,000	4,397,000
57. University of Utah	54,354,000	45,564,000	1,145,000	1,706,000	3,380,000	2,559,000
58. University of Hawaii at Manoa	54,025,000	34,886,000	16,296,000	250,000	1,695,000	898,000
59. University of Virginia	51,653,000	35,152,000	2,777,000	761,000	6,897,000	6,066,000
60. Case Western Reserve University	51,598,000	42,182,000	370,000	2,408,000	3,422,000	3,216,000
61. University of Missouri at Columbia	50,765,000	18,577,000	9,661,000	3,402,000	15,624,000	3,501,000
62. Oklahoma State University	49,094,000	11,833,000	2,070,000	2,972,000	28,025,000	4,194,000
63. University of Illinois at Chicago	48,734,000	26,357,000	902,000	909,000	16,311,000	4,255,000
64. University of Nebraska at Lincoln	47,809,000	17,156,000	1,293,000	2,063,000	26,328,000	969,000
65. State University of New York at Stony Brook	47,495,000	31,946,000	1,327,000	1,412,000	7,026,000	5,784,000
66. University of Kentucky	47,387,000	16,497,000	11,074,000	4,768,000	15,048,000	0
67. University of Alabama at Birmingham	47,167,000	39,030,000	840,000	3,705,000	0	3,592,000
68. U. of Texas Health Science Center at Dallas	46,671,000	34,087,000	30,000	3,967,000	64,000	8,523,000
69. New Mexico State University	46,198,000	29,235,000	9,049,000	1,730,000	822,000	5,362,000
70. Princeton University	46,027,000	30,892,000	250,000	1,184,000	9,409,000	4,292,000*
71. Washington State University	45,878,000	20,567,000	964,000	1,465,000	14,802,000	8,080,000
72. University of New Mexico	45,581,000	33,040,000	4,190,000	3,875,000	2,739,000	1,737,000
73. University of California at Irvine	44,458,000	34,772,000	869,000	0	2,910,000	5,907,000
74. University of California at Riverside	44,233,000	13,864,000	1,970,000	0	25,187,000	3,212,000
75. Colorado State University	44,171,000	26,702,000	5,537,000	8,467,000	3,201,000	264,000
76. Boston University	44,135,000	38,257,000	1,015,000	1,994,000	2,000	2,867,000*
77. Woods Hole Oceanographic Institute	43,132,000	38,560,000	3,000	646,000	679,000	3,244,000*
78. University of Cincinnati	42,709,000	24,924,000	201,000	1,880,000	10,654,000	5,050,000
79. University of Oklahoma	42,290,000	17,229,000	668,000	2,328,000	21,254,000	811,000
80. Mississippi State University	41,376,000	11,151,000	16,151,000	1,606,000	11,164,000	1,304,000
81. City U. of New York Mt. Sinai School of Medicine	37,750,000	23,967,000	323,000	1,426,000	3,742,000	8,292,000
82. University of Massachusetts at Amherst	37,719,000	21,338,000	1,693,000	3,096,000	10,318,000	1,274,000
83. Utah State University	37,526,000	21,716,000	8,440,000	1,365,000	5,630,000	375,000
84. Kansas State University	37,233,000	10,421,000	16,801,000	721,000	6,915,000	2,375,000
85. Auburn University	36,279,000	10,237,000	13,670,000	2,899,000	6,422,000	3,051,000*
86. Virginia Commonwealth University	35,221,000	26,816,000	1,018,000	2,019,000	2,588,000	2,780,000
87. Florida State University	34,969,000	16,910,000	463,000	191,000	16,676,000	729,000
88. Vanderbilt University	34,180,000	24,709,000	601,000	3,376,000	2,250,000	3,244,000
89. Clemson University	32,326,000	9,965,000	10,216,000	1,800,000	9,491,000	854,000
90. Emory University	30,706,000	26,136,000	408,000	2,395,000	317,000	1,450,000*
91. University of California at Santa Barbara	30,055,000	23,131,000	534,000	0	3,152,000	3,238,000
Total, top 91 institutions	**$7,637,185,000**	**$4,905,717,000**	**$526,332,000**	**$383,889,000**	**$1,263,219,000**	**$558,028,000**
Total, all institutions*	**$9,503,725,000**	**$6,002,558,000**	**$665,677,000**	**$538,203,000**	**$1,592,799,000**	**$704,489,000**

† Includes Applied Physics Laboratory with $257-million in federally financed research-and-development expenditures.

‡ Excludes expenditures at university-associated federally funded research-and-development centers.

* Indicates estimated numbers.

SOURCE: NATIONAL SCIENCE FOUNDATION

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THE CHRONICLE
of Higher Education.

ISSN 0009-5982

December 17, 1986 • $1.95
Volume XXXIII, Number 16

News Summary

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HOLIDAY NOTICE
The next issue
of *The Chronicle*,
dated January 7,
will be mailed on January 2.

An observatory proposed by the University of Arizona has encountered opposition from environmentalists. Story on Page 6.

The president of Hunter College is a student and faculty member there, too. Story on Page 13.

Michigan's Legislature has approved a plan to let parents begin paying tuition long before their children enter college. Story on Page 17.

The regents of the University of Alaska have decided to restructure the state's system of higher education. Story on Page 17.

Corporations gave an estimated $1.87-billion to education in 1985, according to a report. Story on Page 25.

College officials responded angrily to the Secretary of Education's charges that they are soft on campus drug use. Story on Page 29.

Five football players have been suspended by the N.C.A.A. after they failed drug tests administered during championship tournaments. Story on Page 31.

Colleges on the Israeli-occupied West Bank were shut down following the fatal shooting of two Palestinian students. Story on Page 34.

The United States and four European countries have chosen strikingly different ways to pay for college costs. Story on Page 35.

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France Withdraws University Reforms Students Opposed

Protester dies after beating by police; minister quits

By DAVID DICKSON

PARIS

Prime Minister Jacques Chirac last week withdrew the controversial proposals for the reform of higher education that had provoked the largest student demonstrations in France since May 1968.

He also accepted the resignation of Alain Devaquet, Minister for Research and Higher Education and chief architect of the reforms.

The government's decision was prompted partly by the size of the protests and partly by violent clashes that had occurred with the police. More than 500,000 students had taken part in a march through the streets of Paris, with indications that the number would be significantly increased by the participation of labor unions and other political organizations in further demonstrations planned for last week.

Compromise Effort Overshadowed

Before Mr. Chirac announced that he was withdrawing the reforms, the Minister of Education, René Monory, said he was prepared to delete those sections to which the students were objecting. However, Mr. Monory's effort to placate the protesters was quickly overshadowed by the news that one demonstrator had died after being beaten up by the police.

The student, 22-year-old Malik Oussekine, is said to have had a history of kidney problems, and the exact circumstances of his death were still unclear last week. However, his death prompted a wave of public sympathy for the students that eventually forced Mr. Chirac to back down.

Mr. Chirac was also reacting to warnings from several prominent labor leaders that the unrest threatened to spread to other areas as an excuse for broader demonstrations against the government, as well as to a significant fall in the value of the franc in

Continued on Page 35, Column 1

SEEKING BALANCE

Many Colleges Taking a New Look at Policies on Sexual Harassment

By LIZ McMILLEN

Prompted in part by a recent Supreme Court decision, colleges and universities are re-examining their policies on sexual harassment—and in many cases they do not like what they see.

In the process, administrators and faculty members find themselves enmeshed in difficult ethical and civil-liberties questions.

Their goal: to write guidelines that will identify and weed out harassing behavior without jeopardizing academic freedom or employees' due-process rights.

"You're trying to balance two sometimes-conflicting interests," says Ted Finman, a law professor at the University of Wisconsin at Madison. "Reasonable people disagree about where the balance should be struck."

"Any time there's an element of sexuality, the task is more difficult, and it ends up touching some level of the human heart and soul," says Mary Jo Small, associate vice-president for finance at the University of Iowa.

Still, pressure is growing for universities to take strong measures to prevent sexual harassment, a serious and continuing problem on campuses.

Harassment policies soon will be "as common as tenure codes," says Anne T. Truax, director of the women's center at the University of Minnesota, which enacted a policy five years ago. "Any institution that doesn't have a policy is asking for trouble."

Trouble has already reached the Uni-

Continued on Page 16, Column 1

Guidelines for sexual-harassment policies, offered by the American Council on Education, appear on Page 16.

3 Small Black Colleges in Poor Financial Shape Denied Accreditation by Southern Association

By STACY E. PALMER

Three small, historically black colleges were stripped of their accreditation last week by the Southern Association of Colleges and Schools.

Bishop, Knoxville, and Morristown Colleges—all private institutions—were denied accreditation by the association because of their insufficient financial resources. All three had been put on probation by the association during the past few years because of their fiscal difficulties.

Officials at Knoxville said they would appeal the decision; Bishop and Morristown were still debating whether to appeal last week. During the appeals process the colleges would continue to have the status of accredited institutions.

Loss of accreditation would be a serious setback for the financially struggling colleges. Unaccredited colleges cannot receive support from the U.S. Department of Education, and their students are not eligible for federal financial aid.

In addition, college officials say that fund raising would be far more difficult,

Continued on Page 24, Column 1

New Divestment Pressure Looms for Universities

Colleges may face new pressure to sell South Africa-related holdings if the author of the well-known principles on such investments decides to back total divestment. See Page 39.

No 'Dirty Tricks': Intelligence College Strives for Academic Respectability

By CHERYL M. FIELDS

WASHINGTON

It's not the stereotypical college campus.

Armed guards stand at the gate. A visitor must be met at the entrance to the sole classroom building, surrender any tape recorders or cameras, and be escorted through the halls. To walk freely in the sleek, modern building, people must wear identification cards based on their security clearances.

All students must have such clearances, and most courses include the discussion of classified information. Students in some classrooms work at computer terminals programmed with classified data systems.

Despite its many unusual aspects, the Defense Intelligence College—located at Bolling Air Force Base here—is an accredited graduate institution that is working hard to expand its ties with the traditional academic community.

A Need for Professional Training

The controversy over the secret sale of arms to Iran and the funneling of proceeds to the Nicaraguan rebels, apparently engineered by staff of the White House National Security Council, highlights the need for the type of professional intelligence training the college provides, says one official.

Operated by the Department of Defense and accredited by the Middle States Association of Colleges and Schools, it is the only place in the country that offers a master-of-science degree in strategic intelligence.

It is also an example of the kind of specialized academic institution set up in recent years by large employers to provide their mid-career employees with the chance to earn advanced degrees at the same time they acquire skills to help them advance in developing professions—in this case that of intelligence analyst.

Examples in the corporate world include a Ph.D. program in policy analysis offered by the Rand Corporation and a master's

Continued on Page 22, Column 1

MARGINALIA

Again we take our Penn in hand
(If *we* don't, some pettifogger'll)
And send from here throughout the land
Our annual year-end doggerel:

On Hollins and the Ivies,
On Tiffin and Malone,
Of all degrees, we now bestow,
This one, our very own:

The merriest of seasons,
The happiest of years.
For '87 we wish for you
Much laughter; never tears.

Let's tip our Stetson to Tufts and Taft,
Let's play a tune for Thiel and Yuba.
For all the nation's music schools,
Let's toot loud on our tuba.

Let's decorate the house with Berry,
Load the board with Rice and Bacone;
While in the kitchen, Bethune-Cookman's
Chestnut pie is in the Macon.

For Carnegie, let's have a Mellon,
For Citrus C., an orange that's oranger.
For Indian River, heaps of Curry;
For Campbell C., a soup-filled porringer.

Let's cut the steaming pie of kidney
For every supping Duke and King;
To all who come from Hampden-Sydney,
Let's serve the Betz of everything.

Let's draw Clearwater from the Wells
And quaff a wholesome potion.
Or have a glass of Brandywine
Or stronger stuff, by Goshen.

Possibly some Benedictine
Or some wine (Catawba)
Helping everyone to be
Jolly, not macabre.

Let's up, Ohio State, and at 'em;
Raise our brimming eggnog glasses,
'Tis the season, Sweet Briar, Chatham
(Alice Lloyd, at Pippa, Passes).

Let's toast all those at U. of M.,
At Harvard, Swarthmore, Brown, Pomona,
At Lehigh U. in Bethlehem,
At Simmons, Stanford, Cal Sonoma.

To Whitman C. in Walla Walla,
To M.I.T. and then Biola,
To U. Missouri's branch at Rolla,
Let's give a Case of Coker cola.

Gather round the tall Lone Pine,
Vassar, Lawson, Nassau, Fashion,
And raise a cup of happiness
To all of Mass.'s lads and Lassen.

Let's sing out Carrolls, every one:
Montana's and Wisconsin's;
And not forget Ohio's (John);
Let's serenade the Johnsons.

Let's dance round Wash.'s Evergreen,
Oakwood, or Sequoias;
Let's call the Pine Bluff; Cedar Crest;
And bow to Georgetown's Hoyas.

Let's dance a holiday fandango;
Pirouette a Grace-ful waltz
For Clarion State in old Venango
And for SUNY at New Paltz.

Let's deck the halls of higher knowledge
Dear to you and yours this season;
Hail each university or college—
Ivy, redbrick; healthy, wheezin'.

Let's venture forth and greet our colleagues
In the professoriate;
If not in class, let's search for them.
(Where's their laboratory at?)

Let's Doane our furry sleigh apparel
And fly to Idaho at Moscow
Soar to snowy roofs at Maryl-Hurst, then off to fete Don Bosco.

By Shepherd, Fox is watched by nights
While Angelina, Harper, harpist,
Watching o'er Loretto Heights,
Gladden Sitka, where the sharpest

Cold of winter, joined by Snow,
Free-zes Waters on Sage and Reed,
Glazes White Pine, whitens Mo.;
While Frost be-Jewells Mann and Steed.

Brisk the air we'll find at Frostburg;
Brisk the Pace at Rush and Skidmore;
While the warmth at Isothermal
Never varies (wish it did, more).

Our spine will tingle (a Christmas tactic
At Logan College of Chiropractic).

On Mesa, Butte, and Limestone Boulder,
At Crowley's Ridge, by Stony Brook,
At Rockmont C. and Rocky Mountain,
We will find a wintry look.

At Harcum, herald angels sing;
The air is filled with sounds of Bliss.
At Angelo, there's caroling;
Let's move on south; don't miss Ole Miss.

(That's near the home of Uncle Judd,
His feet in Miss., not Harvey, Mudd.)

By the fire, let's fill the sock;
Trim the Cypress; hang the Ball
And candy Kean for Bay de Noc.
Our treetop Starr will say to all

From Brandeis U. to Santa Monica,
Merry Christmas! Happy Hanukkah!
—C.G.

In Brief

Trustees of Mercer U. to Close Tift College

Less than a year after agreeing to take over ailing Tift College, Mercer University's Board of Trustees has voted to close the institution, one of the nation's oldest colleges for women.

The trustees acted after the number of students attending Tift dropped this year by 47, to 191. Tift merged with Mercer in June because officials feared that declining enrollments would cause budget deficits. The liberal-arts college, located in Forsyth, Ga., is 137 years old.

Tift's students will be allowed to transfer to Mercer's campuses in Macon or Atlanta and be given scholarship money with which to pay Mercer's higher tuition. Some members of Tift's faculty will be offered jobs at Mercer as well, university officials said.

University Sets Penalties in Texas Hazing Death

The dean of students at the University of Texas at Austin has approved varying degrees of punishment for students involved in the hazing death of a fraternity pledge, including expulsions, suspensions, disciplinary probations, and oral and written admonitions, a university spokesman said.

In keeping with privacy laws, the university would not divulge additional details.

Mark Seeberger died of alcohol poisoning in September after an event that has been described as a fraternity "ride"—the practice of driving pledges far from their rooms and leaving them stranded, often while intoxicated.

Some of the people in the case have asked to make an appeal before a hearing officer, who will be assigned by the university. If they are not satisfied with that decision, they can then appeal to the president.

The case is being investigated by a grand jury.

Citadel Suspends 3 Cadets in 2nd Hazing Incident

Three cadets have been suspended by the Citadel following a second hazing incident at the state-supported military college, officials said last week.

The cadets were suspended following what a Citadel spokesman, Lieut. Col. Ben Legare, called "a physical hazing" of a fourth student. He said all the students involved were white.

The punishment was harsher than that imposed on five white cadets who, dressed in sheets, entered the room of a black freshman, muttered obscenities, and left a charred paper cross.

These students were stripped of their rank, restricted to the campus for six months, and ordered to "walk punishment tours."

The black student left the Citadel last month as a result of the incident, and black leaders in South Carolina charged the institution with racial insensitivity.

WIDE WORLD

Colonel Legare said the latest incident was more serious because it involved "physical" abuse of another student.

Police Subdue Gunman at U. of Kentucky

A former employee of the University of Kentucky, apparently angry over his firing last summer, sprayed the campus with bullets and held police at bay for more than 10 hours last week, before being subdued (*above*). Two people were injured slightly in the incident.

University officials said the gunman, Ulysses Davis, III, was a maintenance worker until he was fired, reportedly for fighting with a fellow employee.

The officials said no classes had been interrupted by the incident because the university's classroom buildings were not within range of the gunfire.

More Harvard Graduates Pick Academic Careers

Interest in college teaching is rising among graduates of Harvard College, while the attraction of careers in law, medicine, and business is declining, according to a survey of the Class of 1986.

Of the 1,500 seniors surveyed last spring, 21 per cent said they would seek graduate degrees in the arts and sciences, compared with a low of 13 per cent in 1977. Nine per cent of the 1986 graduates said they planned to become college teachers, the highest proportion since 1976.

Those planning to study law fell from a high of 19 per cent in 1981 to 10 per cent. Interest in medical careers went from a high of 18 per

Number of Colleges and Universities by Enrollment in Fall, 1985

	Universities	Other 4-year	2-year	Total
Private institutions	**62**	**1,383**	**383**	**1,808**
Under 200	0	256	71	327
200 to 499	0	226	135	361
500 to 999	0	319	97	416
1,000 to 2,499	0	396	48	444
2,500 to 4,999	5	134	8	147
5,000 to 9,999	25	44	3	72
10,000 to 19,999	24	8	0	32
20,000 to 29,999	5	0	1	6
30,000 or more	3	0	0	3
Public institutions	**94**	**470**	**929**	**1,493**
Under 200	0	0	3	3
200 to 499	0	9	26	35
500 to 999	0	29	96	125
1,000 to 2,499	0	93	311	404
2,500 to 4,999	1	107	221	329
5,000 to 9,999	7	125	161	293
10,000 to 19,999	33	90	88	211
20,000 to 29,999	31	15	20	66
30,000 or more	22	2	3	27
Public and private	**156**	**1,853**	**1,292**	**3,301**
Under 200	0	256	74	330
200 to 499	0	235	161	396
500 to 999	0	348	193	541
1,000 to 2,499	0	489	359	848
2,500 to 4,999	6	241	229	476
5,000 to 9,999	32	169	164	365
10,000 to 19,999	57	98	88	243
20,000 to 29,999	36	15	21	72
30,000 or more	25	2	3	30

Note: The university data are for institutions with a significant level of activity in doctoral-level education as measured by the number of doctoral recipients and the diversity in doctoral-level program offerings.

SOURCE: U.S. DEPARTMENT OF EDUCATION

The Chronicle of Higher Education (ISSN [illegible]) is published weekly except the last two weeks in August and the last two weeks in December, at 1255 Twenty-Third Street, N.W., Washington, D.C. 20037, on the Friday preceding the issue date. Subscription rate: $50 per year ($51 if bill is to be sent). Second-class postage paid at Washington, D.C., and additional mailing offices. Copyright © 1986 by The Chronicle of Higher Education, Inc. POSTMASTER: Send address changes to Chronicle of Higher Education, P.O. Box 1955, Marion, Ohio 43305. Member, Audit Bureau of Circulations.

cent in 1980 to 13 per cent, and business dropped from a high of 21 per cent in 1983 to 18 per cent.

6 Wesleyan U. Students Charged with Disruption

Six Wesleyan University students who interrupted campus tours to tell prospective freshmen and their parents about rapes on the campus have been charged with disruptive activity and violating the rights of others, according to a university spokesman.

The students' case will be heard next month by the Student Judicial Board. They could face punishments ranging from a warning to expulsion.

In early October the students began making short statements during campus tours, charging that up to 30 women a month were raped there and that the dean of student's office was unresponsive to problems of sexual abuse. Later they began acting out guerrilla-theater skits to illustrate their point, the spokesman said.

U. of California Moves to Combat Sexual Assaults

The University of California at Berkeley has taken steps to combat sexual assaults on its campus after a coalition of women's groups staged a series of protests.

The Coalition to Break the Silence charged that complacent attitudes on the part of students, faculty members, and administrators had prevented vigorous measures to discourage attacks and "acquaintance rape."

The university has begun awareness training for administrators and established a committee of students, professors, and administrators to consider additional measures. Campus police patrols have also been increased.

The protests came after several incidents on the campus, including one last September involving four football players and a female student. Prosecutors declined to press charges against the players, but they have been disciplined by the university.

Corrections

- An article on Carol Sasaki, founder of Helping Ourselves Means Education, (*The Chronicle*, December 3) may have implied that Ms. Sasaki is still a single mother. She was a single mother when she began her academic career, but is now married.
- An article on the federal government's education advisory councils (*The Chronicle*, December 3) incorrectly said the Education Department had spent $1.8-billion on the councils in 1986. The amount was $1.8-million.
- A table of state appropriations for higher education (*The Chronicle*, October 29) contained two errors. Appropriations to the Northeastern Ohio Universities College of Medicine totaled $11,320,000 in 1986-87, for a two-year gain of 16 per cent. The Medical College of Ohio at Toledo, incorrectly listed as Northeastern Medical College, received $22,138,000 in 1986-87, for a two-year gain of 16 per cent.

The Christmas Spirit in Madison

Wisconsin cheese, trees, and a music-filled Tudor dinner set the holiday tone

MADISON, WIS.

If someone who doesn't know the Ganshers gets a box of University of Wisconsin cheese from them this holiday season—"Merry Christmas! Love from the Ganshers," a label affixed to the form letter inside will say—it will be because confusion came, late and uninvited, to take the places of Food Science Club members who didn't show up for the mailing-label session.

Doubtless the missing members were busy—studying for exams, writing papers, finishing research projects due by semester's end. For them—and for many others in a university town like Madison—Christmas waits until the last blue book is turned in and the last footnote typed.

But the club's officers, who had 500 boxes of cheese stacked in one of the food-science building's walk-in refrigerators, had no such latitude. U.P.S. was coming the next morning to pick up more than 200 boxes that the club's customers had ordered—at prices ranging from $5.95 to $7.95—for delivery to distant friends and relations. Soon thereafter, the remaining boxes were to go on sale at a table in the university's dairy store.

So the work session, one of the last in a year-long effort that is expected to earn the Food Science Club about $2,000, got under way despite the shortage of volunteers.

Mark Krivchenia, a graduate student who is head of the cheese-sale project, had mapped out a complex labeling operation. It began with pages of computer printouts in the Bakery and Food Formulation Laboratory and ended with boxes arranged in ZIP-code order out in the tile-walled, ground-floor corridor of Babcock Hall. The boxes had already been packed with assortments of cheddar and smoked cheddar—made by club members in the university's dairy plant and aged since February—as well as with purchased Swiss cheese, sausage, and honey. "All of these fine foods," Mr. Krivchenia's form letter advised, "were made in Wisconsin."

It turned out, however—and this was how the confusion began—that there was not enough smoked cheddar, fine or otherwise, to fill all the orders for the "Babcock Block" assortment. Then labels began coming out of the Bakery and Food Formulation Laboratory faster than they could be affixed to boxes, creating a backup.

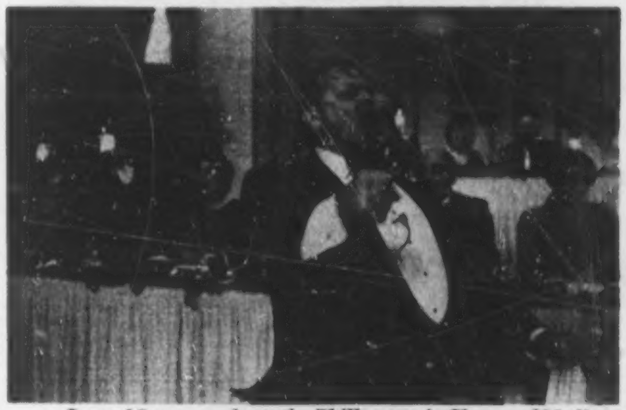
PHOTOGRAPHS FOR THE CHRONICLE BY MORRY GASH

At the U. of Wisconsin at Madison, the Forestry Club sells Christmas trees in the livestock pavilion.

Mr. Krivchenia dispatched reinforcements from the laboratory to the hallway, but no one remembered to brief them on the coding system he had devised to identify the various assortments. Some of the labels that were supposed to go on Wisconsin Samplers went on State Street Specials instead, and vice versa. In the end, a lot of boxes had to be reopened and checked.

That almost everyone seemed to be having fun nonetheless, even as the all-important hour of "The Cosby Show" approached, was the only reminder that the Christmas break was just around the corner. Someone had brought cheese sandwiches and eggnog. Jim Beyer carved up a smoked cheddar and a sausage with a big pocket knife, and Paul Smak donned a holiday garland of return-address labels while the club's crack masking-tape team secured the last of the boxes. "Did you hear us caroling?" asked someone who had been working in the laboratory. "We sounded great."

■



Samuel Jones conducts the Philharmonic Chorus of Madison at a Tudor dinner in the Memorial Union's Great Hall.

Icicles created by wind-driven spray clung to rocks at the edge of Lake Mendota, which forms the northern boundary of the university's campus. But a heavy snow had not yet fallen, and Raymond Guries said he was worried that the public wouldn't be thinking about Christmas.

He was standing at the time in the middle of the university's dirt-floored livestock pavilion, surrounded by almost 500 Christmas trees. He and the members of the Forestry Club, to which he is the faculty adviser, wanted them all sold within three days.

"Our prices are pretty good—about 20 per cent less than retail," he said, basking in sunshine admitted by windows high in the walls. "Besides, we can't afford to stay open until the day before Christmas, not with exams coming up."

The club, which purchases the trees in bulk and has them delivered, usually makes enough from its sale to put $1,000 a year toward scholarships, said Mr. Guries, who is an associate professor of forestry. Then he turned to watch an agriculture-school dean struggle with an eight-foot Scotch pine toward the Forestry Club member who was measuring trees and calculating their prices. "For you, Frank," Mr. Guries shouted across the pavilion, "that's a six-footer!"

As Mr. Guries talked, there appeared in his miniature indoor forest a miniature person bundled into a miniature hooded coat, a scarf, gloves, snow pants, and miniature red boots. He wandered stiffly from tree to tree, inspecting white pines and balsam firs with equal curiosity and apparent glee.

"Isaac?" a man's voice called. "Isaac?" The child didn't move. Then the man emerged from behind a stand of pines. "Isaac!" he said, smiling and holding out one hand. The child reached up and took it, and they walked off together toward the door.

■

Strings of colored lights described a larger Christmas tree on the façade of the university's Memorial Union. In its crowded rathskellar, hundreds of students were paying varying amounts of attention to a local rock band. Upstairs, 325 people from all over Wisconsin had gathered eagerly outside the Great Hall for one of this season's seven "Tudor Holiday Dinner" concerts.

The dinner concerts are a tradition that dates in fact to 1933 and in fiction to the reign of Elizabeth I, who might or might not have used folding chairs and red and green paper tablecloths at her own holiday celebrations. The concert's program made the most of its fictional connections, offering notes on "historye" and "etyquett" as well as the words of "carols for syngynge." The union's waiters, all students, had somehow been persuaded to dress in beefeater costumes borrowed from the union theater.

But the food was good—smoked salmon, roast tenderloin, and much more—and the music, by the Philharmonic Chorus of Madison, was excellent. The chorus was led with considerable ebullience by Samuel M. Jones, a professor of music at the university, who exhorted his audience to join in on familiar carols. "Let's make it big!" he told them, and they did, pushing up the decibel counts as they began a hearty rendition of "Hark the Herald Angels Sing."

For the last verse, the exuberant Mr. Jones unleashed his sopranos in a glorious descant that started in the middle of the line "Mild he lays his glory by," and soared all the way through the last "Glory to the newborn king!" For at least 325 Wisconsinites, the Christmas season was officially open. And the next day, it snowed.

—L.B.

Give & Take

A "video brochure" is being used by the College of Mount Saint Vincent to solicit contributions from its graduates.

Donald F. Alfano, executive director of institutional advancement at the college, said the eight-minute video had been developed "to bring a more personal message than a printed appeal." The video features sights and sounds of the campus and messages from officials and graduates of the college.

Copies of the cassette were sent last month to 500 alumnae in selected parts of the country. Thus far 38 per cent of those who received the video have responded with contributions or pledges totaling $73,071. The college, which is currently trying to raise $1-million from its graduates as part of a capital campaign, now plans to send the video to its 7,500 other alumnae.

•

A computerized index of articles and books on fund-raising techniques is being created by the National Society of Fund Raising Executives.

The project, called Operation FIND, was started in September. Since then, all articles published in 1985 and 1986 in four professional fund-raising journals, plus a wide variety of books and other publications, have been indexed.

There is no charge to use the index, and users can search for listings under 400 key words. A search under the heading "planned giving" turned up 38 entries for journals, books, and conference papers.

For more information, contact Stacy O'Conor, N.S.F.R.E., 1101 King Street, Alexandria, Va. 22314, or call (703) 684-0410.

•

A philanthropic thought for every day of the year: That's the idea behind the "Giving Is True Loving" calendar.

Milton Murray, the director of philanthropic services for institutions of the General Conference of Seventh-Day Adventists, said the purpose of the project was "to advance philanthropy."

Mr. Murray's office produced the calendar, which the Workman Publishing Company issues as a special edition in its "page-a-day" calendar series. Any profits go to charity, but so far there haven't been any. Still, $2,500 of the proceeds from sales of more than 22,000 calendars for 1986 were distributed among five national organizations involved in fund raising and philanthropy. More than 21,500 copies of the 1987 calendar already have been sold. College fund raisers have been using them as gifts for donors and volunteers.

Mr. Murray and his staff personally delivered copies of the 1987 calendar to the offices of all U.S. Congressmen and Senators on National Philanthropy Day, November 15.

For more information, call Mr. Murray's office at (202) 722-6131.

Philanthropy

Attorneys General Propose a 'Model' Law to Regulate the Activities of Fund Raisers

Colleges call plan burdensome; it would require registration in each state where they solicit donors

By ANNE LOWREY BAILEY

Higher-education leaders have strongly criticized a proposed "model" law that would regulate college and university fund-raising activities for the first time.

The proposed law, which would also increase regulation of other forms of professional fund raising, was approved by the members of the National Association of Attorneys General at their annual meeting last week.

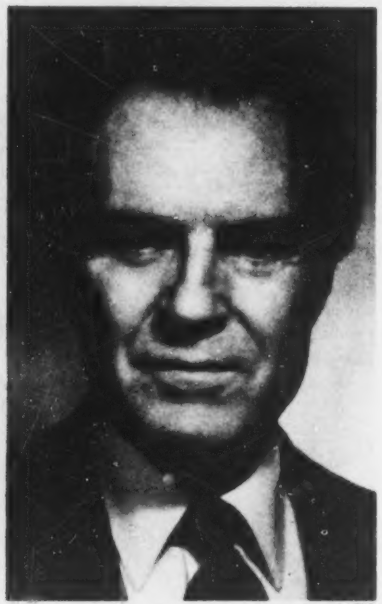
It would require colleges and universities to register, pay fees, and file annual financial reports and other documents in each state where they solicit potential donors.

The proposed law also contains a controversial "point-of-solicitation" disclosure section that would require a college or university to tell all prospective donors what percentage of contributions would go to cover fund-raising costs. Many observers believe that portion of the proposed law would be unconstitutional.

The proposed law was approved earlier by the National Association of State Charity Officials, which represents officials who regulate charities.

BILL BURKE

CASE's Richard Edwards: The law could create "confusion, red tape, and needless costs" for colleges.



AAFRC

AAFRC's John Schwartz: "Our job will be to make sure that the model law passes into state statutes intact."

11th-Hour Lobbying Effort

Higher-education officials said the model law, which will serve as the basis for legislation to be introduced in all 50 states, would needlessly burden colleges and universities with costly, time-consuming reporting requirements.

The Council for Advancement and Support of Education conducted an 11th-hour lobbying effort to win a "time-honored" exemption for colleges and universities. Such an exemption now exists in all states that have statutes regulating fund raising except Massachusetts. As a result, the association of attorneys general, in a report accompanying the model law, included a paragraph that education lobbyists said would encourage states to consider granting colleges and universities such exemptions individually.

Some professional fund raisers said the action by the attorneys general was a positive step.

John J. Schwartz, president of the American Association of Fund Raising Counsel, called it a victory. Mr. Schwartz

Continued on Page 28, Column 1

Corporations Gave $1.87-Billion to Education Last Year, Up 10.3 Pct. over 1984, Study Finds

NEW YORK

Corporations gave education an estimated $1.87-billion in 1985, an increase of 10.3 per cent over the preceding year, the Council for Financial Aid to Education says in a report to be released this week.

The increase in giving to education last year came in spite of a 5.3-per-cent drop in pre-tax corporate income. As a result, the proportion of profits given to education was the highest on record, an estimated 0.84 per cent. Education's share of all corporate contributions was 42.6 per cent, which the council said was edging back toward the 1981 high of 43.4 per cent.

The estimates are based on responses to an annual survey of corporate giving conducted by the C.F.A.E. and the Conference Board, a business research organization.

'Dramatic Evidence' of Commitment

Last month the Conference Board reported that overall corporate giving to charity in 1985 had amounted to an estimated $4.4-billion. However, it noted that the 10-per-cent increase was the smallest in five years.

This week the C.F.A.E. issued its detailed analysis of corporate support of education in 1985.

John R. Haire, president of the council, said the survey results provided "dramatic evidence" of the corporate commitment to education. "While profits in 1985 were more than 13 per cent below their 1979 peak, contributions to education were more than twice those of 1979," he said.

The C.F.A.E. estimates that between 70 and 75 per cent of corporate contributions to education go to colleges and universities.

Noting the slowdown in the growth rate of company giving, Mr. Haire said he was apprehensive about the outlook for corporate contributions in the near future. "It may be that corporate support has temporarily peaked," he said. "Major corporate donors indicate that there has been little or no growth in 1986, and some tell us they are cutting back in 1987."

"This is not good news at a time when the nation is trying hard to upgrade the quality of its teaching and research and to renew its education facilities and laboratories," said Mr. Haire. "This effort will continue to need the strongest private-sector support, and we count on corporations to provide a significant share."

The C.F.A.E.'s national estimates are projections based on data provided by 439 companies, which reported contributions to education of $650-million in 1985. That figure represented a 15.7-per-cent increase over the $561-million reported by 422 companies the previous year.

$1.7-Billion to All Causes

Total contributions to all charitable causes amounted to $1.7-billion for the 439 companies in the survey, which either are listed among the *Fortune* 1,000 or budget at least $100,000 a year for contributions.

While the survey respondents represented a small number of companies, they provide a large proportion of company giving nationwide, the C.F.A.E. said.

More than 20 per cent of total corporate contributions in 1985 took the form of company products and surplus property. Education received 53 per cent of the product gifts and 13 per cent of the gifts of property. The biggest contributors of products were in the electrical-machine industry,

Continued on Following Page

Corporate Gifts to Education

	Corporate contributions to education	1-year change	As per cent of pretax net income	As per cent of all giving by corporations
1970	$ 320,000,000	−14.7%	0.42%	40.2%
1971	345,000,000	+ 7.8%	0.40%	39.9%
1972	365,000,000	+ 5.8%	0.36%	36.2%
1973	410,000,000	+12.3%	0.33%	34.9%
1974	445,000,000	+ 8.5%	0.33%	37.1%
1975	450,000,000	+ 1.1%	0.34%	37.4%
1976	560,000,000	+24.4%	0.34%	37.7%
1977*	665,000,000	+18.8%	0.33%	37.1%
1978*	780,000,000	+17.3%	0.33%	37.4%
1979*	880,000,000	+12.8%	0.34%	38.5%
1980*	980,000,000	+11.4%	0.41%	41.5%
1981*	1,090,000,000	+11.2%	0.48%	43.4%
1982*	1,250,000,000	+14.7%	0.74%	43.0%
1983*	1,525,000,000	+22.0%	0.73%	42.0%
1984*	1,700,000,000	+11.5%	0.72%	42.5%
1985	1,87[illegible] 000,000	+10.3%	0.84%	42.6%

* Revised from earlier estimate

SOURCE: COUNCIL FOR FINANCIAL AID TO EDUCATION

In 1985, Companies Gave $1.87-Billion

Continued from Preceding Page

which includes computer manufacturers. They gave more than 75 per cent of their product donations—$74-million worth—to education.

For the fifth year in succession, company-sponsored foundations paid out in grants more than they received in contributions from their parent corporations.

The market value of the assets held by 221 company-sponsored foundations increased 20 per cent, due largely to higher stock prices.

The C.F.A.E. noted that by making contributions to their foundations in years of high profits, corporations in effect set aside reserves to support charitable causes in years of poorer profits.

The council said that this helps insulate regular recipients of corporate contributions from the ups and downs of the business cycle.

Manufacturing companies gave a larger share of their total contributions to education than did non-manufacturing companies, the C.F.A.E. said. Survey respondents in four industries—engineering and construction, electrical machinery, mining, and textiles and apparel—gave more than half of their total contributions to education.

The C.F.A.E. is a non-profit organization that promotes voluntary support of education.

The council's complete report, *Corporate Support of Education 1985*, will be available in early January. Copies are $15 each, prepaid, and may be obtained from the C.F.A.E., 680 Fifth Avenue, New York 10019. —PAUL DESRUISSEAUX

Exxon Fund's Head Expected to Resign

NEW YORK

Robert L. Payton, president of the Exxon Education Foundation since 1977, is expected to announce this week that he will leave that post to return to higher education.

Mr. Payton has accepted a position at the University of Virginia as a scholar-in-residence at a public-policy center primarily concerned with studying the American Presidency. Officials of the university said Mr. Payton would take up his duties there in the spring.

Former University President

Mr. Payton declined to comment on his plans until after the official announcement of his resignation, scheduled for late this week.

Mr. Payton is a former president of Long Island University's C. W. Post College and of Hofstra University.

The Exxon Education Foundation provides more financial support for education than any other oil-company contributions program.

All but about 10 per cent of the $29-million in grants the foundation made in 1985 went to colleges and universities.

The foundation's budget for 1985, however, was cut by about 25 per cent as a result of the plunge in the price of petroleum products.

In Brief: Philanthropy

Donor Revises Terms of Gift to Endow Chair

A controversy has been settled at California State University at Northridge over a $500,000 gift to establish the university's first endowed chair. Faculty members had charged that the original terms of the gift would have infringed on academic freedom.

The W. P. Whitsett Foundation, named for an early developer of the San Fernando Valley, had proposed that the holder of the endowed chair in history "have an understanding" of Mr. Whitsett's philosophy, including his "strong belief in God."

The endowment proposal also called for a representative of the foundation to sit on a committee that would select the historian to fill the chair.

Those provisions were eliminated after the university's history department voted to reject the proposal on the grounds that it might require the holder of the chair to embrace Mr. Whitsett's beliefs.

The department did agree to prepare and publish a pamphlet about Mr. Whitsett.

Notes on Capital Campaigns

► Oakland University has begun a three-year campaign to raise $15-million for library construction, and to support scholarship and research. The $7.5-million in contributions already received included a $1-million anonymous gift for the library.

► The College of the Ozarks has raised $7-million in one year to complete the first part of a two-phase, $15-million campaign. The funds will finance scholarships for students from Central America, an addition to the gymnasium, and other projects.

► The University of Tennessee has begun a campaign to raise $10-million to expand its work in agricultural research and education. Some $5-million already has been raised.

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WIDE WORLD

Thousands of French students, some carrying a funeral spray, march through Paris in mourning for a protester who died after being beaten by police.

France Withdraws University Reforms in Wake of Student Demonstrations

Continued from Page 1

foreign exchanges in response to the student protests.

In announcing his decision to withdraw the proposed changes, which students had claimed would increase discrimination between universities and make them more selective in their choice of entrants, the Prime Minister said he was asking Mr. Monory to carry out a new, broad-based investigation into the future needs of the university system, in full discussion with administrators, professors, and students.

"No evolution in the universities, however necessary, can turn out well without the involvement of all interested parties, notably students and teachers," Mr. Chirac said in a brief television appearance. "It can only be carried out under calm conditions, and that is clearly not the case today."

Implicitly acknowledging that the reasons for the student protests went beyond the specific proposals for university reforms, Mr. Chirac said his goal was to find ways of adapting French universities to the evolution of the modern world, to the ambitions of France, and to "the legitimate aspirations of young people, as much in the cultural domain as in that of work."

National Commission Is Planned

Shortly afterward, Mr. Monory said he would be setting up a national commission to carry out the investigation, to be chaired by a prominent person. He added that the commission would listen to "every student group, every labor union, and every university" that wanted to speak to it.

Mr. Monory, a member of the centrist group in the coalition government, made it clear at a press conference that he had never been a keen supporter of the need for a new law for universities, but had been pressured into introducing the reforms by various right-wing members of Mr. Chirac's party, the Rally for the Republic.

He also said that, for the time being, he would be taking over full responsibility for university affairs following the resignation of Mr. Devaquet. The government has yet to announce how it will allocate responsibility for the second half of Mr. Devaquet's ministerial portfolio—government-financed basic research.

Students Satisfied with Action

Student groups throughout the country have reacted with satisfaction to the news that the government had given in to their main demand, the withdrawal of Mr. Devaquet's proposed reforms.

Strikes that had been held at virtually every university in France were called off after a final day of action last Wednesday, and classes were expected to return rapidly to normal.

At the same time, students expressed bitterness about the death of Mr. Oussekine and the strong measures used by the police in response to violent acts by the demonstrators, which are generally acknowledged to have been the result of a relatively small number of provocateurs.

A march in Paris last Wednesday to commemorate Mr. Oussekine and protest against the police behavior attracted an estimated 120,000 participants.

Wide Variations Found in Ways U.S. and Europe Allocate College Expenses

By JEAN EVANGELAUF

While the United States and Western European nations share similar goals for higher education, they have chosen strikingly different ways to pay college expenses, according to a new study of student financial assistance.

D. Bruce Johnstone, the author of the report, said a comparative approach to the question of who pays for college can highlight the intended and unintended consequences of policies to shift costs among students, parents, taxpayers, and colleges and philanthropists. "It helps to sharpen the kind of analysis we need for our own programs," he said.

In the United States and the four countries covered by the study—Britain, France, Sweden, and West Germany—each college-financing system reflects the desire to assure equality of opportunity, to keep level or reduce the cost to taxpayers, to provide higher education with the money it needs, and to avoid political antagonisms, Mr. Johnstone said.

In brief, here is how each country allocates college costs. The information covers the 1985-86 academic year.

Britain. The government automatically pays for tuition. Students are not expected to pay for their living expenses; no generally available loan programs exist, and students are discouraged from working while in college. Parents who earn above $15,000 are expected to contribute to living costs, and grants are available to students from families who earn less.

France. Most universities do not charge tuition. Parents who earn above $5,400 are expected to contribute to their children's living expenses, and need-based grants are extremely limited.

Sweden. Universities do not charge tuition. All full-time students receive a small grant and a substantial loan from the government to cover their living costs. The parental contribution is small.

United States. Students are expected to contribute to their tuition and living expenses through borrowing and summer and term-time work, and parents earning more than $15,000 are expected to cover some costs. Government grants are available to low-income students. At private institutions, low- and middle-income students may receive institutional aid.

West Germany. Universities do not charge tuition. Parents and students are expected to pay for living expenses. Students may meet their costs through part-time work and by taking out heavily subsidized government loans.

'Cultural Roots' Reflected

Determining which system is best depends on one's point of view, said Mr. Johnstone, who is president of the State University of New York College at Buffalo. Among parents, the Swedish pay the least, while among taxpayers, the French pay the least. Borrowers pay the least in Germany. Academically talented full-time students face the lowest costs in Britain. Students with weak academic backgrounds or those who attend college part-time are best served in the United States, which has a tradition of broad access to higher education.

Cost arrangements reflect a nation's "cultural roots," Mr. Johnstone said. In the United States, for example, the parental contribution is high because college is seen as an extension of childhood. Students are financially dependent on their parents and often have no clear occupational goals and little sense of adult civic responsibilities, he said. In contrast, the Swedish view college as the beginning of adulthood, and students are expected to pay their own way.

In discussing the implications of his research, Mr. Johnstone said it pointed out the tradeoffs that occur in various cost arrangements. For example, Germany has strictly rationed its low-interest loans, thus preventing students from borrowing the amount of the parental contribution.

Mr. Johnstone's analysis covers only the cost to students of a college education, not the total cost of providing that education. Reliable figures showing how much aid European colleges and universities receive from their respective governments do not exist, he said.

Copies of the 184-page report, *Sharing the Costs of Higher Education*, are available for $10.95 prepaid from College Board Publications, Box 886, New York 10101.

Paying College Costs in 5 Countries: Where a Typical Student Got the Money in 1985-86

					United States	
For high-income families	Britain	West Germany	France	Sweden	Public	Private
Parents	$3,280	$3,472	$2,285	$ 701	$4,114	$8,659
Student earnings, savings, loans	0	926	0	2,332	1,200	1,000
Government	0	0	403	1,885	0	0
Institution or philanthropy	0	0	0	0	0	0
Total	$3,280	$4,398	$2,688	$4,918	$5,314	$9,659
For middle-income families						
Parents	$2,148	$2,585	$1,478	$ 350	$2,500	$2,759
Student earnings, savings, loans	194	1,189	806	2,683	2,239	3,475
Government	937	624	403	1,885	575	1,825
Institution or philanthropy	0	0	0	0	0	1,600
Total	$3,280	$4,398	$2,688	$4,918	$5,314	$9,659
For low-income families						
Parents	$ 194	$ 375	$ 344	$ 0	$ 0	$ 150
Student earnings, savings, loans	0	1,458	0	2,332	2,039	3,309
Government	3,086	2,565	1,672	1,885	3,275	4,500
Institution or philanthropy	0	0	0	0	0	1,700
Total	$3,280	$4,398	$2,016	$4,217	$5,314	$9,659

Note: Detail may not add to totals because of rounding.

SOURCE: D. BRUCE JOHNSTONE

1/6/87 C2175-1

THE CHRONICLE
of Higher Education.

ISSN 0009-5982

January 7, 1987 • $1.95
Volume XXXIII, Number 17

News Summary

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A slimy fungus may be the ingredient that gives Stradivari violins their special quality. Story on Page 4.

"Academic alliances" are proliferating as college professors and schoolteachers attempt to share their expertise. Story on Page 11.

Governors are relying more on their own advisers and less on college officials to develop higher-education policies. Story on Page 17.

A controversial plan to merge several Texas universities has been dropped by a special panel on higher education. Story on Page 17.

John W. Gardner, who is directing a study of leadership, says we aren't doing enough to develop new leaders or to protect the ones we have. Story on Page 29.

The value of college and university endowments rose 27.1 per cent in fiscal 1986. Story on Page 29.

Employers plan to hire about the same number of college graduates this year as they did a year ago. Story on Page 33.

The debate over the N.C.A.A.'s drug-testing policy heated up last week after 21 football players were barred from bowl games for using anabolic steroids. Story on page 34.

The American system of higher education compares favorably with that of Japan, according to two new studies. Story on Page 39.

South Africa has authorized tough new regulations to bar virtually all forms of protest in black schools. Story on Page 39.

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LOANS REPLACE GRANTS

Students' Borrowing Quintuples in Decade, Raising the Specter of a 'Debtor Generation'

By JEAN EVANGELAUF

WASHINGTON

Student borrowing to pay for college has quintupled in the last decade, raising concern that high levels of education debts will overwhelm many young Americans, said a Congressional report issued last week.

The report said that one-third to one-half of all students now leave college with debts. On average, students at public four-year colleges graduate with $6,685 in loans; those at private four-year colleges with $8,950.

"We now have a generation of students who leave college in debt," said Janet S. Hansen, author of the study and director of policy analysis for the Washington office of the College Board. The views in the report are Ms. Hansen's, and do not necessarily reflect those of the College Board.

"We really do have to be concerned about whether we are asking young people to take on an obligation that may be onerous in ways we can't expect them to understand at age 18 or 19," she said in an interview.

"We should not take a *caveat emptor* attitude toward students."

The report was released by the Congressional Joint Economic Committee, which advises Congress on matters affecting national economic policies. While the committee does not have the power to write legislation or revise student-aid policies, its reports are generally taken very seriously by members of Congress.

"Growing student indebtedness has raised questions about the implications of the debt burdens for the national economy, for the economic well-being of borrowers, for equality of access to higher education and even for the educational process itself," said a summary of the report.

However, it cautioned, very little conclusive evidence about the precise impact of heavy indebtedness is available.

The fear that borrowing affects students' educational, career, and personal choices is based on "impressionistic and anecdotal evidence," said Ms. Hansen in the interview.

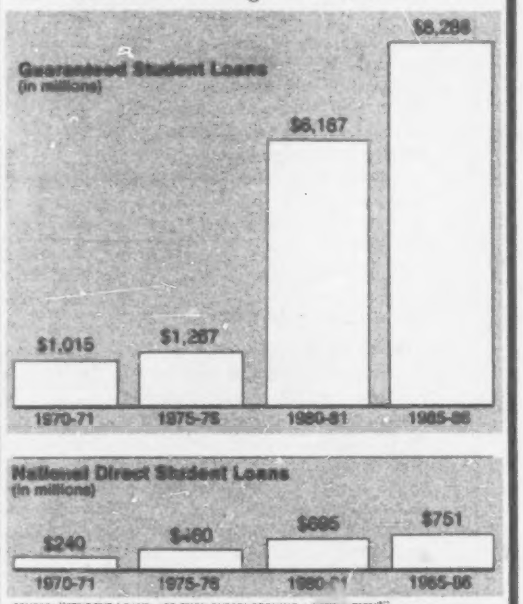
"We don't want to ignore that evidence," she said, "but we don't want to assume we have a problem when we don't."

The Joint Economic Committee has commissioned additional studies on education, and will probably conduct more research on student debt, a committee spokesman said.

Over the last decade loans have replaced grants as the major vehicle for student assistance, said Ms. Hansen. Borrowing under federal

Continued on Page 18, Column 1

How Student Borrowing Has Grown in 15 Years



SOURCE: "STUDENT LOANS: ARE THEY OVERBURDENING A GENERATION?"

Anger over University Conditions, Impatience with Political System Underlie China Protests

WIDE WORLD

Chinese students read wall posters in Shanghai. One poster says, "We cannot wait 10,000 years for more freedom and better lives."

By BONNIE LEE SEXTON

BEIJING

Widespread demonstrations at China's major universities—the largest wave of protests in this country in a decade—highlight the frustration that many of the country's young people feel about university conditions and their future job prospects.

The protests, and the government's response, also dramatize long-standing divisions among China's leaders on contacts with the West. As part of his modernization program, Deng Xiaoping, the country's paramount leader, has sought to bring to China the benefits of Western science and technology. In the process, many students and young professionals have been

Continued on Page 40, Column 1

Higher Education Losing Credibility in Congress, Council Chief Warns

By STACY E. PALMER

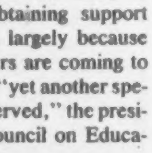
WASHINGTON

Colleges and universities are likely to have a difficult time obtaining support from the new Congress, largely because more and more lawmakers are coming to view higher education as "yet another special interest group to be served," the president of the American Council on Education has warned.

In a letter to members of the council, Robert H. Atwell said higher education's credibility with members of Congress had been eroded by a variety of factors, ranging from the growing number of colleges that have evaded traditional review prac-

Continued on Page 28, Column 1

Trying to End Sports Woes at Southern Methodist U.



Faculty members, angered by repeated cheating in S.M.U.'s football program, are pressing for reforms. See Page 34.

Text of Congressional Economic Panel's Report on Student-Loan Burden

WASHINGTON

Following is the text of a report—"Student Loans: Are They Overburdening a Generation?"—prepared for the Joint Economic Committee of Congress by Janet S. Hansen, director of policy analysis for the Washington office of the College Board. Opinions are those of the author and do not necessarily reflect the views of the committee or the board. References have been omitted.

I. Introduction

- *Mortgaging a Generation*—a report on student loans by the California Postsecondary Education Commission.
- *Mortgaged Futures*—a book on how to pay for college by Marguerite J. Dennis.
- "We've said to young people, if you want an education, here's a loan, pay for it yourself."—Theodore J. Marchese, *Change* magazine, May/June 1986.
- "The rapidly increasing dependence on loans as a means of financing students is alarming and must end."—Frank Newman, *Higher Education and the American Resurgence*.

As these titles and quotes and the commissioning of a paper by the Joint Economic Committee indicate, concern is mounting about the rapidly growing indebtedness of students pursuing postsecondary education. Attention to this issue is long overdue.

Until recently, research and analysis on student loan programs (most of which involve repayment guarantees and/or subsidies from the federal government) largely focused on their costs to the government or on the level of borrower defaults and how to reduce them. Because of the need to cut federal deficits and spend federal dollars as wisely as possible, these issues will and should continue to be debated.

Equally important, however, are questions about what large amounts of student debt mean for the economy, for individual borrowers, and for education and society.

Student loans are not new. President Lyndon Johnson, who presided over the creation of the Higher Education Act of 1965 which included student grant, loan, and work programs in its pathbreaking Title IV, was said to have been most interested personally in the Guaranteed Student Loan (G.S.L.) program. He had borrowed to attend college in the 1930's and reportedly felt that loans should be more widely available to students in higher education. In fact, [Robert A.] Caro reports that Johnson borrowed from the bank, from his college, from friends, and even from the local newspaper publisher, and dropped out of school to teach for a while when he couldn't keep up the payments on these debts (and the loan he took out to purchase a used Model A!).

The G.S.L. proposal was designed to facilitate student borrowing by overcoming the reluctance of private lenders to make uncollateralized loans to young persons with no credit history through the provision of repayment guarantees. It also gained support from those wishing to derail college tuition tax credits, which almost passed the Senate in 1964. It was viewed largely as a minimally-subsidized loan of convenience for the middle class; it had an eligibility ceiling of $15,000 in annual income at a time when median family income was $6,957. Needier students already had access to another federally-sponsored loan program, National Defense (now Direct) Students Loans (N.D.S.L.), which had been enacted as a last-minute substitute for politically-unpopular grants in the National Defense Education Act of 1958. Before the establishment of these federal programs, both colleges and states had created opportunities for students to borrow to help pay the costs of college.

Why are student debt levels the subject of rising concern? Mainly the now huge size of G.S.L. and the large number of students who use it to take out ever larger loans. In 1985-86, 3.6 million students borrowed $8.3-billion in G.S.L.'s. Over 800,000 students took out about $750-million in new N.D.S.L.'s in that year, and other smaller federal loan programs accounted for about $800-million more. Loans are now not just a convenience for the middle class but an important part of the way they and lower-income families finance higher education. This transformation, however, has occurred with relatively little attention paid, either at the beginning or along the way, to what the impact of borrowing for education would be on students who would have to repay the loans.

This paper is an introduction to the complex issue of whether heavy dependence on student loans is creating serious problems for individuals or the society in which they live. While more and more people are looking at this question, it is nevertheless the case that research and analysis are as yet skimpy and fragmentary. Much of the current concern about student indebtedness is based on impressionistic and anecdotal evidence, but data about student loans in general and the G.S.L. program in particular are woefully inadequate for addressing most policy concerns.

This paper, then, is suggestive rather than definitive. It examines the available evidence about student loan rates and levels and how these have changed over time. It identifies some of the major questions that underlie the feeling that reliance on student loans to finance higher education has gone too far, provides some preliminary indications about the extent of the problems, and addresses what can and needs to be done. It establishes a foundation for the task of further marshalling evidence, analysis, and discussion to help determine how great the danger is that we are undesirably mortgaging the futures of college students or jeopardizing national economic growth.

Though existing statistics on loans frequently make it impossible to distinguish borrowing for graduate and professional education from pre-baccalaureate borrowing, this analysis focuses whenever possible on the latter. Graduate students represent only about one and a half million of the approximately 14 million students enrolled in postsecondary education (defined here as including the proprietary sector as well as government and independent nonprofit colleges and universities). Though their borrowing is often large—the average medical student graduates $30,000 in debt—their circumstances are different than undergraduates: they know with some certainty, for example, what careers they will enter and what salaries they can earn. Special programs, moreover, can be and have been created to deal with the pockets of extremely high borrowing found in some graduate and professional fields. Assessing the effects of graduate student borrowing requires an analysis different from the one in this paper; an important contribution on this subject is the study recently published by the Association of American Universities.

Section II of the paper traces the growth of student borrowing over the last two decades. Then, sections III through VI discuss student loans and how they may affect the economy, the well-being of young adults, the achievement of equal educational opportunity, and the educational process. Section VII looks at the risks

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Increased Student Borrowing Raises Fear of 'Debtor Generation'

Continued from Page 1

programs totaled about $9.8-billion in 1985-86; 10 years earlier the amount was about $2-billion. Over that same period, federal spending on grants and scholarships dropped from about $6.8-billion to $4.8-billion.

Last year about 4.7 million students borrowed from the federal government, three times the number in 1975-76. On an inflation-adjusted basis, individual students are borrowing more than their counterparts of a decade ago, the report said.

According to a survey of campus student-aid directors conducted last year, the average indebtedness of borrowers at the end of four years of college is $6,685 for those enrolled at public four-year institutions and $8,950 for students at private four-year institutions. At two-year public and private colleges, borrowing averages $3,303 and $4,461, respectively.

Guaranteed Student Loans have evolved over the last 20 years from minimally subsidized loans of convenience for middle-income students to highly subsidized loans for needy students, Ms. Hansen noted. She said the growing reliance on loans has raised serious questions about the equality of access to higher education.

Effects of Loans Not Neutral

That is largely because loans, unlike grants, are not neutral in their effects on borrowers. Women and minority-group members, for example, would find that loan repayments consume a larger share of their income than would white males, Ms. Hansen said, because there continue to be disparities in their earnings.

"The federal strategy for fostering equality of opportunity in higher education, which initially focused on a balanced array of grants, loans, and work opportunities for the disadvantaged, has been transformed," said the report, "with uncertain and largely unexamined implications for the groups who were the original focus of federal concern."

Ms. Hansen said the dramatic growth in the cost of the Guaranteed Student Loan program presented serious questions about the federal government's role in providing subsidized loans.

"One has to wonder just how long the federal government will or should tolerate this kind of financial uncertainty without seeking cost-cutting changes in the program," the report said. "Such changes could have serious implications for educational access, given the critical role the G.S.L. now plays in educational finance for those whose resources are otherwise inadequate to pay for college."

Fewer Well-Paying Jobs

The outgoing chairman of the Congressional committee, Rep. David Obey, Democrat of Wisconsin, and the incoming chairman, Sen. Paul Sarbanes, Democrat of Maryland, noted that the ability of borrowers to repay their loans "will be directly dependent on the performance of the economy of the next decade."

Recent trends are not encouraging, they said, because the number of well-paying jobs for young people has dropped significantly since 1979. That decline, coupled with rising debt and the growing number of low-income borrowers, is "disturbing," they said.

Ms. Hansen said students could not know the financial risks they are assuming when they borrow. If the economy continues to be characterized by low income growth and low inflation, then borrowers today will find the burden of repayment heavier than that of their counterparts of the 1960's and 1970's, she said.

The lawmakers said they were also worried that many students from middle-income families were finding themselves squeezed by soaring college costs and tightened eligibility requirements for federal loans. Families with incomes above about $40,000 are ineligible for federal aid to cover costs at a typical public university and must borrow from nongovernmental sources, they said.

As evidence of the stress that middle-class families face, the lawmakers cited reports that the National Association of Student Financial Aid Administrators is conducting sessions for its members "on how to deal with the emotional trauma which they confront with increasing frequency when families learn that no institutional or governmental assistance is available."

Bruce M. Carnes, Deputy Under Secretary of Education for planning, budget, and evaluation, disputed the report's contention that the shrinkage of federal grant aid had caused a surge in borrowing. "Student indebtedness is growing because college costs are going up so much," he said. "College costs are not going to go down if we decide to double or triple grant money. They'll go up."

Instead of increasing grant money, he said, the Reagan Administration wants to help students manage their college costs by making loan repayments more flexible. This week the Administration will ask Congress to provide $600-million in fiscal 1988 for a loan program that would tie borrowers' repayments to their income after graduation. Congress has approved the spending of $5-million to experiment with the "income-contingent loans" this year.

Under the Administration's budget proposal, about 1.5 million students would be able to obtain such loans—which would not be federally subsidized—in academic 1988-89.

The debate over loans will always be controversial, Ms. Hansen said in the interview. While some believe debt is burdensome, others argue that loans are crucial in providing access to college to students who otherwise would be unable to afford it.

Changes in Borrowers

"There's never going to be a yes-or-no answer to the question about whether loan limits are too high," she said. "You have to ask about it in terms of different types of borrowers." Fifteen years ago most borrowers were in baccalaureate or graduate programs, she said, while now, many community-college and proprietary-school students are borrowing.

Studies show that loan defaulters are not those with the largest debts, she said. Those most likely to default are students who enroll in proprietary schools, borrow relatively small amounts, and drop out without completing their programs. They don't earn enough to make even small monthly repayments, she said.

Others say that defaulters are often disillusioned by their proprietary-school or community-college training and don't want to pay back their loans because they don't think they got their money's worth.

Researchers who have tried to determine what level of debt is manageable have come to no consensus, according to the report. Estimates of acceptable levels range from 3 per cent to 15 per cent of pre-tax income. And even those percentages form only a rough measure of the ability to repay, which also depends on such factors as total family income, family size, and earnings prospects.

A Small Part of All Debt

Individuals do not typically find that holding student loans prevents them from assuming other types of debt, Ms. Hansen said. "The credit market does not appear to place meaningful limits on borrowers' ability to obtain consumer credit in large amounts," she said, adding that an important implication of that finding is that colleges and financial institutions should educate student borrows about how to manage credit.

There are no reliable studies on whether paying off loans requires recipients to choose high-paying careers or delay marriage or childbearing, Ms. Hansen said.

The question of whether the nation's historically high level of debt is dampening economic growth is also a matter of debate, Ms. Hansen said, but the debate is unlikely to hinge on the portion of debt represented by student loans. Though they've soared, such loans are a tiny portion of total consumer debt, amounting to only about 1.1 per cent of the $3.2-trillion in individual indebtedness outstanding in 1985, according to government estimates.

While no systematic information exists on how student loans affect the economy at large, there is widespread belief that they create some benefits such as increasing educational attainment and the tax base, Ms. Hansen said.

Copiesof the 74-page report, "Student Loans: Are They Overburdening a Generation?" are available without charge from the Joint Economic Committee, Publications, Dirksen Senate Office Building, Room G01, Washington 20510.

Table 1: Student Borrowing by Program for Selected Years

	1970-71	1975-76	1980-81	1985-86
Guaranteed Student Loan				
Number of loans (in thousands)	1,017	922	2,899	3,640
Dollars loaned (in millions)				
Current dollars	$1,015	$1,267	$6,187	$8,288
Constant 1986 dollars	$2,872	$2,567	$8,031	$8,493
Average loan				
Current dollars	$998	$1,374	$2,134	$2,277
Constant dollars	$2,824	$2,784	$2,770	$2,333
National Direct Student Loan				
Number of loans (in thousands)	452	690	813	854
Dollars loaned (in millions)				
Current dollars	$ 240	$ 460	$ 695	$ 751
Constant 1986 dollars	$ 680	$ 932	$ 902	$ 770
Average loan				
Current dollars	$532	$ 667	$ 853	$ 880
Constant dollars	$1,505	$1,351	$1,107	$ 902
PLUS				
Number of loans (in thousands)	—	—	6	212
Dollars loaned (in millions)				
Current dollars	—	—	$ 14	$ 548
Constant 1986 dollars	—	—	$ 16	$ 562
Average loan				
Current dollars	—	—	$2,333	$2,585
Constant dollars	—	—	$3,029	$2,649

— Program not begun.

students face in borrowing to pay for education and at how the United States compares to other countries in protecting students from these risks. A final section indicates what preliminary conclusions can be drawn from this analysis.

II. Trends in Student Borrowing

Despite the fact that students borrow almost $10-billion annually for postsecondary education, statistics on student loans are poor to nonexistent. Researchers and governing bodies alike have expressed, in various fashion, their frustration over the lack of basic data to answer obvious questions about who is borrowing, how much they are borrowing, and what has happened to borrowing over time.

- "Currently available data do not permit accurate determination of the actual cumulative debt burdens for Guaranteed Student Loan borrowers in California."
- "There exists no coherent central data base for the Guaranteed Student Loan Program, no central integrated data base which links the various Title IV programs, and no systematic cross-year data on student aid recipients across programs."
- "The data suffer from a number of serious limitations precluding, for the most part, any *definitive* assessment of the incidence and level of borrowing among postsecondary students."
- "The best we can do is read tea leaves and make inferences."

There are almost no data except overall program totals available at the national level for G.S.L., which is far and away the biggest student loan program. Most G.S.L. data comes from state guarantee agencies and varies in amount and quality; one major shortcoming is that state agencies have no way of combining information on students who take out loans guaranteed by more than one agency.

Table 2: Average Indebtedness from All Sources for Undergraduates Who Borrow, 1985-86

Institutional type	After 2 years	After 4 years
Public 2-year	$3,303	—
Private 2-year	$4,461	—
Public 4-year	$3,217	$6,685
Private 4-year	$4,340	$8,950

Note: Data are from 485 public 2-year, 107 private 2-year, 335 public 4-year, and 736 private 4-year institutions.

With the exception of a few direct surveys of students or institutions, there are no data on combined borrowing from different programs: G.S.L., N.D.S.L., health professions loans, college and university loan funds, etc.

Thus, it is impossible to assemble precise and comparable nationwide statistics on student borrowing over the past two decades. Nevertheless, a judicious choosing of tea leaves makes it possible to give an impressionistic description of such borrowing and how it has changed in recent years.

Most student borrowing occurs in the three main federal loan programs: G.S.L., N.D.S.L., and Parent Loans to Undergraduate Students (PLUS), a G.S.L. offshoot established in 1980 to provide less-subsidized loans to parents, graduate students, and independent undergraduates. Table 1 gives basic statistics on these three programs for selected academic years since 1970-71, in both current and constant (adjusted for inflation) dollars.

The raw numbers in Table 1 suggest why concern over student loans has been on the rise, showing as they do a startling increase in the amount of borrowing especially under the G.S.L. program. After going along during the early 1970's at slightly over a billion dollars a year, G.S.L. borrowing took off after passage of the Middle Income Student Assistance Act (M.I.S.A.A.) in November 1978 removed all income limits on eligibility. By 1980-81 G.S.L. borrowing had reached over $6-billion and was slowed only temporarily by the reimposition of income restrictions in 1981. By 1985-86 borrowing had climbed to over $8-billion in G.S.L.; in addition, students or their families were taking out more than a billion dollars more in N.D.S.L. and PLUS loans. (The exact amount of PLUS loans being taken by students rather than by parents in unknown; some early data indicated it might be about half.)

Table 3: GSL Indebtedness of Currently Enrolled Borrowers and Repayers in California as of June 30, 1984

Total borrowed	Currently enrolled borrowers	Repayers
$0-$2,500	56.4%	63.4%
$2,501-$5,000	23.7%	26.2%
$5,001-$7,500	8.3%	5.2%
$7,501-$10,000	6.4%	3.6%
$10,001-$15,000	3.6%	1,4%
Over $15,000	1,5%	0.2%

Table 1 suggests several important qualifiers to the impression that student indebtedness had run wild, however. The size of average annual G.S.L. loans more than doubled over the 15 years shown, but more important to the overall size of the program was the nearly four-fold increase in the number of borrowers. This is especially significant in light of the fact that postsecondary enrollments have been relatively steady since the mid-1970's, indicating that borrowing is a much more widespread occurrence among postsecondary students in the mid-1980's than it was in the early 1970's. Moreover, Table 1 illustrates that the *value* of the average annual G.S.L. and N.D.S.L. has actually declined over this period when inflation is taken into account. Thus, though many more students are borrowing each year than 15 years ago, on average their loans are smaller in terms of real purchasing power.

The piecemeal available data indicate that cumulative indebtedness of students is rising along with nominal increases in annual borrowing. A 1986 survey of financial aid directors nationwide by the College Scholarship Service (C.S.S.) and the National Association of Student Financial Aid Administrators (NASFAA) provides the best up-to-date indication of the debt levels of undergraduate students completing programs of study in 1985-86. Table 2 shows average debt levels for students who borrow after two years in public and private two-year colleges and after four years in four-year colleges and universities. The statistics of most interest are those suggesting that student borrowers at public colleges are graduating with an average debt of $6,685, while their private college counterparts have debts averaging $8,950.

Table 5: Cumulative Debt from All Sources of 1984 Seniors at 22 Private Colleges

Debt	Per cent
No debt	27%
$1-$2,499	4%
$2,500-$4,999	10%
$5,000-$7,499	16%
$7,500-$9,999	20%
$10,000-$12,499	17%
$12,500-$14,999	3%
$15,000 and over	3%

Note: Percentages are not weighted by institutional enrollments or to adjust for differences in response rates. Results are based on 6,866 respondents from 22 institutions.

Though the data are again spotty, clearly today's students are accumulating more total indebtedness than did their counterparts in earlier years. [Jerry S.] Davis, using data on loans guaranteed by the Pennsylvania Higher Education Assistance Authority, reports that seniors leaving school in 1974-75 had cumulative G.S.L. loans averaging $3,698, a number which grew modestly to $4,474 in 1980-81 and then bounded upward to $7,110 in 1983-84. Elsewhere he reports that in 1980-81 slightly over 600 Pennsylvania undergraduates left school owing more than $7,500 in G.S.L.'s; in 1983-84 about 12,400 undergraduates left school owing this much.

The California Postsecondary Education Commission found evidence of increasing dependence on G.S.L.'s by comparing the accumulated indebtedness of students enrolled in school in 1984 (who are likely to borrow still more before leaving) and borrowers already in repayment (see Table 3) and noting the larger proportions of currently-enrolled borrowers at the higher loan levels. Nearly 20 per cent of those who were currently enrolled already had borrowed over $5,000, as compared to 10 per cent of those who had left school and were repaying their loans.

Table 4: Cumulative GSL Debt of Seniors in Pennsylvania and New York, Selected Years

Amount	Pennsylvania 1974-75	Pennsylvania 1977-78	Pennsylvania 1980-81	Pennsylvania 1983-84	New York 1985-86
Less than $2,500	29.3%	33.7%	31.7%	9.4%	10.5%
$2,501-$5,000	45.2%	34.8%	35.0%	17.6%	18.3%
$5,001-$7,500	25.5%	31.3%	30.4%	27.2%	21.6%
$7,501-$10,000	n/a	0.2%	2.9%	43.8%	38.8%
$10,001-$12,500	n/a	n/a	n/a	2.5%	10.8%
Number of students	8,065	9,185	18,672	23,023	43,080

n/a = Not applicable.

The cumulative indebtedness of graduating seniors in the University of Wisconsin system rose 19 per cent (from $5,884 to $6,995) between 1982-83 and 1984-85.

Cumulative loan amounts, however, vary widely around the average. Table 4 shows cumulative G.S.L. indebtedness for Pennsylvania seniors leaving school in selected academic years; it indicates both the range of debt and also how cumulative loan levels and the number of borrowers have been rising. It also shows cumulative indebtedness of seniors in New York in 1985-86. The large percentage of students with high debt levels in New York reflects both more recent data and the fact that a high proportion of New York students attend private colleges. Table 5 shows the distribution of debt among students graduating in 1984 from 22 schools belonging to the Consortium on Financing Higher Education (COFHE), which represents 30 of the most selective and expensive private colleges in the country. These data, unlike most that are available, indicate how many students graduate without debt as well as the range of debt for those who borrow. At the 22 COFHE schools, only a quarter of 1984 graduates were debt-free, while 43 per cent left school owing $7,500 or more. Table 6 shows the distribution of average debt levels reported by financial aid directors nationwide for 1986 students completing four years of school. It indicates that relatively high levels of borrowing (average cumulative debts exceeding $10,000 for undergraduates) can be found at more than a quarter of private colleges and at a tenth of public ones.

Translating from current to constant dollars modifies the impression of growing indebtedness given by current dollar figures. The C.S.S./NASFAA survey found current indebtedness among private college graduates who borrowed to be $8,950 in today's (1986) dollars. This would be the same after accounting for inflation as a cumulative indebtedness of $4,285 in 1975. An undergraduate today borrowing $12,500, which was the G.S.L. statutory maximum until legislative changes in October 1986, would be indebted at the same real level as an undergraduate who completed a bachelor's degree in 1975 with $5,985 in debt.

Thus while borrowing is increasing in amount and is certainly more widespread, inflation is an important part of the growth in cumulative debt levels.

Perhaps more important than total debt levels for undergraduates is the fact that borrowing is now so much more common. In the early years of G.S.L. most undergraduate borrowing occurred in colleges and universities, where students were the most likely to complete degree programs and to have higher earnings after graduation. Indeed, an early concern in G.S.L. was bankers' unwillingness to lend to poor students and to those in community colleges and proprietary schools. Illustrative data from two states demonstrated that these restrictions have been overcome. Community colleges led the way in the growth in use of loans in Illinois between [fiscal] 1975 and [fiscal] 1985 (Table 7). In Pennsylvania

Continued on Following Page

Table 6: Average Debt from All Sources at the End of Four Years, as Reported by Financial-Aid Officers*

Debt after 4 years	Public 4-year institutions	Private 4-year institutions
Under $1,000	0%	0.4%
$1,000-$1,999	1.5%	0.5%
$2,000-$2,999	5.1%	1.5%
$3,000-$3,999	7.6%	2.2%
$4,000-$4,999	20.4%	6.8%
$5,000-$7,499	31.8%	19.3%
$7,500-$9,999	22.8%	38.7%
$10,000-$14,999	9.0%	27.3%
Over $15,000	1.2%	2.6%
n/a	0.3%	0.7%
Total number of schools	333	736
Approximate mean	$6,685	$8,950

* Percentage distribution represents the distribution of survey respondents (one per school), not the number of students in each category.
n/a = Not applicable.

Table 7: Undergraduate Borrowing from All Sources by Institutional Type in Illinois, Selected Years

	Fiscal year 1975	Fiscal year 1985	Per cent change
All schools*			
Number of loans	30,289	106,902	+253%
Amount lent	$ 41,677,113	$245,682,273	+48[illegible]%
Average loan	$ 1,376	$ 2,298	+ 67%
Public 4-year			
Number of loans	17,299	46,937	+171%
Amount lent	$ 19,418,400	$ 99,086,187	+410%
Average loan	$ 1,123	$ 2,111	+ 88%
Community colleges			
Number of loans	3,659	20,666	+465%
Amount lent	$ 3,813,141	$ 41,374,398	+985%
Average loan	$ 1,042	$ 2,002	+ 92%
Private institutions			
Number of loans	9,331	39,299	+321%
Amount lent	$ 16,445,572	$105,221,688	+470%
Average loan	$ 1,977	$ 2,677	+ 35%

* Except proprietaries.

Text of Congressional Report on Student Loans

Table 8: Number of Borrowers Leaving School by Sector in Pennsylvania, Selected Years

Institutional type	1974-75	1983-84	Per cent change
In-state			
4-year private	5,083	16,717	+229%
State universities	4,890	11,426	+134%
State-related	4,297	13,769	+220%
Junior colleges	262	1,373	+424%
Community colleges	1,117	6,975	+524%
Nursing schools	569	1,665	+193%
Proprietary schools	4,443	30,829	+594%
All out-of-state	4,754	12,445	+162%

Continued from Preceding Page

community college and proprietary school participation in student loans has grown significantly faster than the four-year colleges (Table 8).

Scattered additional evidence from around the country supports the view that there has been a large increase in borrowing among students at schools offering two years of study or less.

This change has been part of a larger transformation in G.S.L. from a program intended mainly to ease the cash-flow problems of non-needy families to a major source of funds for low-income students attempting to pay for college.

In Fiscal Year 1983, 40 per cent of all G.S.L. borrowers came from families with annual incomes under $15,000 (Table 9). Median family income in 1983 was $24,580.

The foregoing data suggest that while student loans are growing, individual indebtedness may not be as alarming as overall program statistics suggest.

But what about the future? Not only does the existing data suggest that the rate of increase has picked up in the 1980's, but there are clear signs that indebtedness is likely to continue on its upward course.

The statutory maximum annual loan limit for undergraduate G.S.L.'s was set at $2,500 in 1972, but actual average borrowing has only recently approached this level.

Future increases are unlikely to be constrained, however, since the reauthorization of the Higher Education Act (P.L. 99-498) signed into law on October 17, 1986 raises the undergraduate loan ceiling in G.S.L. to $17,250 and increases borrowing limits under N.D.S.L. as well.

The eligibility of middle-income students for G.S.L. was also curtailed; but states, schools, and private lenders seem likely to develop new borrowing options for this group.

Data from the C.S.S./NASFAA survey of financial aid directors also indicates that borrowing is likely to keep going up.

Table 10 shows that only a minority of respondents favored keeping loan limits where they are, though the range of opinion about what the maximum annual and cumulative loan limits for undergraduates from all sources should be was wide.

Having examined these diverse tea leaves, what inferences can be drawn? The following points sketch what is probably an accurate picture of student borrowing in the United States, the implications of which will be discussed below.

► Of the roughly 14 million students enrolled annually in public, private, and proprietary postsecondary institutions, the evidence suggests that about a third borrow. Since some students may borrow in one year but not another, the proportion of students leaving school with debt is higher. While we lack data to make ready comparisons with earlier years, it is clear that the proportion of students borrowing to finance higher education has grown greatly in the last decade.

► Data on overall borrowing mask significant differences in the proportion of borrowers of different types. Graduate students probably borrow more frequently and at higher levels than undergraduates, full time students more frequently and at higher levels than part-timers, and students at private institutions more frequently and at higher levels than those enrolled at public, lower-cost schools.

► Among undergraduates, the range in borrowing is wide. Relatively few students leave school having borrowed the maximum for which they are eligible.

► Annual and cumulative borrowing by individuals has grown significantly, but adjusting borrowing levels for inflation modifies the magnitude of the increase. Real indebtedness levels are higher than they were 10 or 15 years ago, but not nearly so much as unadjusted statistics would suggest.

► While student loans used to be viewed as largely for the middle class, they are now used by many students from lower-income families as well.

► Student borrowing is now common at community colleges and proprietary schools as well as among students in traditional baccalaureate programs, but the heaviest dependence on loans and the highest debt levels are found among students enrolled in private colleges and universities.

Table 9: Income Distribution of GSL Recipients, Fiscal Year 1983

Income	Financially dependent students	Financially independent students	All borrowers
Below $15,000	34.5%	48.9%	39.5%
$15,000-$29,999	28.6%	24.4%	27.1%
$30,000-$44,999	22.0%	8.0%	17.1%
$45,000-$59,999	7.8%	2.0%	5.8%
$60,000-$74,999	2.1%	0.4%	1.5%
$75,000 and up	0.3%	0.1%	0.2%
Unknown	4.7%	16.4%	8.8%
	100%	100%	100%
Percent of total	65.1%	34.9%	100%

III. Student Loans and the Economy

In 1985 the California Postsecondary Education Commission concluded from a review of the "problems and prospects" of the G.S.L. program in that state that "students with large loan indebtedness will typically have to postpone major purchases for at least a time after entering the work force. . . . The impact of this increasingly common set of circumstances has major implications for the overall health of the economy."

Concern over these issues has arisen among observers of rising student debt levels at the national level as well. The next section of this paper looks at whether the economic well-being of individuals is likely to be affected by the amounts borrowed for college. Here, we look at whether student borrowing poses a threat to the economy at large.

The question is a complex one and has been the subject of virtually no formal analysis. Therefore, the comments made here (even more so than the rest of this study) must be viewed as tentative and suggestive. At a minimum, we may be able to conclude whether the evidence currently available suggests that a major problem already exists or whether much more detailed analyses would be necessary to draw this conclusion.

The danger to the economy posed by the increasing reliance on student loans is presumably the same danger that economists ascribe to high levels of debt in general. [Charles A.] Luckett and [James D.] August claim that the chief economic problem arising from high debt levels is the constraint imposed on spending when income must be directed to debt service rather than current consumption, though they also recognize the fear that creditors will curtail the availability of credit if high debt levels threaten losses on loans. In either event, spending increases could be constrained and economic growth thereby threatened.

National economic activity is spurred by government and business as well as consumer purchases, so economic growth depends on spending patterns in all three sectors. Therefore, one useful way to put student loans in context is to see what proportion they represent of all borrowing. Table 11 shows that the G.S.L. and PLUS programs (which reflect much but not all student borrowing, with N.D.S.L. the most significant omission) are currently a tiny fraction of the nation's debt. Economic demand seems much more likely to be affected by changes in other areas, such as government spending in this Gramm-Rudman era of budget cuts designed to trim the size of the annual federal deficit, than by what happens in the education loan arena.

Focusing on just household, as opposed to business and government, indebtedness, gives student loans a more visible, though still comparatively small, role. Table 12 shows how G.S.L. and PLUS have changed since 1978 in comparison to consumer installment and mortgage debt. In the Federal Reserve Board's economic reports, student loans that have entered repayment are counted as part of the former. Table 12 indicates that G.S.L./PLUS loans in repayment have grown almost 4½ times faster than installment debt as a whole since 1978, though still a small fraction of such debt. This statistic may overstate the significance of student loans as a constraint on household budgets, however, since these loans typically involve ten-year repayment periods and therefore are counted in the stock of debt longer than other consumer loans that are usually paid off in one to five years. The extended repayment period means that monthly repayments on student loans are also lower than repayments on similar amounts of other consumer debt.

Table 10: Opinions of Financial-Aid Officers About Maximum Debt Levels, by Type of Institution

Issue	Public 2-year	Public 4-year	Private 2-year	Private 4-year
Per cent favoring no change in the current statutory annual maximum GSL for undergraduates ($2,500)	67.0%	44.8%	40.7%	31.1%
Per cent favoring increase	33.0%	55.2%	59.3%	68.9%
Per cent favoring no change in the current statutory maximum GSL for all undergraduate years ($12,500)	53.8%	41.4%	40.6%	25.0%
Per cent favoring increase	46.2%	58.6%	59.4%	75.0%

Whether or not today's historically high consumer debt levels are a problem for the overall economy is the subject of debate. Some analysts conclude after examining the various factors contributing to recent rapid increases that households do not appear in a weakened financial position and that household debt does not seem to be an impediment to future consumer spending, barring a general economic downturn. Others argue that both lenders and borrowers are threatened by recent borrowing patterns that mark a sharp step upward from the trends that have prevailed during most of the past 40 years. The outcome of this debate is unlikely to hinge on the comparatively small portion of household indebtedness that represents student borrowing, though any future consensus that debt levels overall have grown too large would certainly have implications for student loans.

Table 11: Outstanding Indebtedness of Government, Corporations, and Individuals, 1985 (in billions of dollars)

Federal government	$1,600.4
State and local government	$ 553.1
Corporations	$1,505.1
Individuals	$3.224.6
GSL and PLUS loans*	$ 36.8

*Includes loans to students still in school and those that have entered repayment—fiscal year data.

Finally, it is important to note that any detailed assessment of the effects of student loans on the economy would have to take account of the possible spurs to economic growth that these loans represent. This is yet another area where adequate research is lacking, in part because the analytical issues are tremendously complicated and difficult to disentangle. The question of how student aid in general, to say nothing of loans in particular, has affected the economy, among other things, is the subject of much debate and little consensus. But there is clearly a widespread belief that some positive benefits have accrued, despite the problems in measuring and attributing them.

At the most obvious level, loans probably contribute to economic growth by freeing resources that would otherwise have to be spent on education. Delving more deeply, analysts who believe that student assistance programs (grants, loans, and work) have had some positive effects on enrollment rates and educational attainments go on to argue that these effects "unquestionably translate into increases in the national income, the national tax base, employment, and overall productivity." [James C.] Hearn and [Sharon L.] Wilford also cite "a rigorous set of analyses" performed by Susan R. Griffith "examining the question of what the absence of the federal Title IV student aid programs since 1965 might have meant to the nation's economy. Her conclusions were blunt: without the massive federal student aid investment, the nation's unemployment levels and tax base would have suffered appreciably over the past twenty years."

Though Hearn and Wilford acknowledge difficulties with Griffith's study, they are right in looking to these kinds of question in order to get a balanced view of the impact of student aid.

What conclusions, then, can we draw about student loans and the economy?

► There is virtually no systematic analysis that addresses directly the question of how student loans do or will affect the economy.

► Whether today's historically high levels of government, corporate, and household indebtedness pose a threat to national economic

Table 12: Installment, Student Loan, and Mortgage Debt Outstanding (in billions of dollars)

	Total GSL/PLUS loans outstanding	(1) Consumer installment credit outstanding	(2) GSL/PLUS loans in repayment	(3) (2) as a per cent of (1)	(4) Mortgage debt outstanding (1-4 family homes)
1978	$ 7.5	$262.0	$ 2.9	1.1%	$ 753.5
1979	$ 9.1	$296.5	$ 3.2	1.1%	$ 870.5
1980	$12.3	$297.7	$ 3.8	1.3%	$ 963.9
1981	$18.5	$314.3	$ 4.7	1.5%	$1,038.5
1982	$22.7	$327.2	$ 6.9	2.1%	$1,074.7
1983	$27.0	$376.2	$ 9.5	2.5%	$1,192.8
1984	$31.9	$453.6	$13.0	2.9%	$1,329.6
1985	$36.8	$535.1	$16.1	3.0%	$1,469.1
Percentage Increase					
1978-1985	390%	104%	450%	—	95%

Note: Total GSL loans outstanding include loans of students still in school as well as loans that have entered repayment. Only loans that have entered repayment are counted by the Federal Reserve as part of consumer installment credit outstanding.
GSL and PLUS data are for the end of the fiscal year. Consumer credit and mortgage-debt data are for the end of the calendar year.

growth is the subject of debate. The outcome of this debate is unlikely to hinge on the comparatively small portion of household indebtedness that represents student borrowing, though any future consensus that debt levels overall have grown too large would certainly have implications for student loans.

IV. Student Loans and Individual Well-Being

The fact that it has not yet been demonstrated that student loans are negatively affecting the national economy does not mean that individual borrowers might not find their economic well-being threatened by the burden of debt repayment. This section examines the burden imposed on young adults by educational debt.

There has been more research which speaks to this issue than on many questions in the student loan area. As noted at the beginning of this paper, loan defaults have been the object of much attention, mostly because of concern over the costs (both political and monetary) they impose on government programs. But since the act of defaulting might be considered at least a rough indication that the loan burden had proven unmanageable for the borrower involved, information on who defaults on student loans is also relevant to the issue of loan burden. Addressing the question more directly have been a number of studies attempting to define manageable levels of borrowing for students. Yet another research tack with implications here is analysis of how student loans might affect a borrower's subsequent ability to obtain credit for such things as a house and a car. Finally, there has been some effort to look at whether educational debt affects other life decisions such as career choice, marriage, and having children.

A number of studies have discovered that high cumulative debt levels do not appear to be the culprit in G.S.L. loan default. Rather, high default rates occur among borrowers of smaller amounts, those who take out only one or two loans, those who stay in school for only a year or two, and those who do not obtain their degrees or certificates. Community college and proprietary school students represent a disproportionately high share of defaulters. The total amount of indebtedness incurred appears to be much less a factor in default than does the relationship of this indebtedness to later income, the prospects for which are poorer for dropouts than for graduates and for students who attain lower levels of schooling.

Researchers have periodically attempted to define manageable levels of indebtedness for college students, usually expressed in terms of the proportion of pre-tax or post-tax income that can reasonably be made available for student loan repayment. [James B.] Stedman reviewed major studies by [Andre] Daniere, [Robert W.] Hartman, [Joseph] Froomkin, and [Dwight H.] Horch and determined that there was "no consensus on where the threshold separating manageable from unmanageable levels of debt should be set." Manageability thresholds derived by these analysts ranged from 3 to 15 per cent of pre-tax income, for example. Nor is the diversity of findings the only problem with this approach. Stedman notes a number of other factors that limit its usefulness.

► Applying manageability thresholds to decisions about how much students can borrow requires information about future incomes and about the exact repayment terms of loans, information which can be difficult to get for a homogeneous group of borrowers (medical students, for example) and almost impossible for a diverse one (all baccalaureate recipients).

► In Stedman's view, many of the calculations used in defining manageable indebtedness are arbitrary.

► Debt manageability thresholds focus mostly on short-term debt burdens, whereas there are also long-range implications that should be considered.

► Relating debt service costs to income is a crude measure of a borrower's capacity to make repayments, a capacity which also depends on such factors as family size, the number of workers per household, and earnings prospects.

► Focusing on the manageability of educational debt alone may shift attention away from how much total indebtedness borrowers can manage and how student debt may cause young adults to be turned down later for additional credit to finance houses, cars, and other goods.

[Robert W.] Johnson and [A. Charlene] Sullivan have addressed this last point. They analyzed eligibility requirements imposed by lenders both for mortgage and consumer credit and assessed the extent to which these requirements were likely to limit individuals with educational debts from obtaining additional credit. Within both sectors the requirements are diverse, but they are less variable and more restrictive in the mortgage lending area. Johnson and Sullivan concluded that student indebtedness as it existed in 1981 (the last year for which they had data) was unlikely to affect the future consumption behavior of young adults. They found that credit markets did not impose particularly effective controls on consumer indebtedness, despite the existence of restrictions on the part of some lenders. In fact, borrowers appeared to be able to obtain "huge" amounts of consumer credit; their own self-imposed limits were responsible for keeping debt levels generally below maximum levels established by the marketplace. Johnson and Sullivan did express concern, based on their projections of future student borrowing and income patterns, that students graduating in the mid-to-late 1980's might find it more difficult to obtain credit for the purchase of residential property. Their projections of future student loan levels appear to be higher than we have actually seen, however, and the analysis would also presumably be affected by the recent and sizeable decline in mortgage interest rates relative to those obtaining when the study was written.

Nevertheless, there are two important points that relate to this issue of how student borrowers will subsequently fare in the credit market. The first is that, contrary perhaps to common expectations, credit markets will *not* keep young adults from getting into financial trouble by restricting the total amount they can borrow for various purposes. In fact, this absence of market discipline appears more evident now than it did three years ago. Sullivan argues that recent developments in the credit market—deregulation, innovations in credit delivery systems and contracts, and increased competition—"have removed some of the forces that have historically operated to limit the amount of credit available, especially

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Text of Congressional Report on Student Loans

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to high-risk consumers." This suggests that educational and financial institutions providing student loans to often young, financially-inexperienced individuals have a responsibility to educate them about shopping for and managing credit so that they do not get themselves in over their heads when they leave school and face a host of new credit decisions and few restrictions.

The second point has to do with the future access of student borrowers to *attractive* forms of credit for their later purchases. Mortgage and consumer credit used to be treated equally under the tax laws, but the tax reform legislation of 1986 gradually removes the deductibility of interest payments, except for interest on home mortgages. For the minority of taxpayers who itemize deductions, this will not only make student loans more expensive because interest will have to be paid with after-tax dollars, but will make second mortgages and other debt instruments based on home equity more attractive ways of borrowing money for whatever purpose than installment loans. If young adults who have borrowed as students find themselves less able than their debt-free peers to buy homes, they may find themselves comparatively disadvantaged in access to the most attractive loans for consumer purchases as well. Since young people have lower incomes and are probably less apt to itemize than the general population, however, this problem may turn out to be more hypothetical than real.

A final aspect of the economic well-being issue has to do with whether individuals who borrow for education will be able to repay only at the cost of choosing high-paying careers or delaying marriage or child-bearing. Three researchers who look at this question directly concluded that such was not the case. Davis reported that "Our 1982 follow-up study of 1981 alumni of Pennsylvania institutions found that: (1) only a few borrowers were experiencing loan repayment burdens; (2) there was no relationship between marital statuses and borrowing rates or levels; (3) alumni who had gone to graduate school or were planning on advanced degrees had *higher*, not *lower*, debt levels than others who had completed baccalaureate degrees; (4) there were no significant differences in first year earnings of borrowers and non-borrowers employed in similar occupations, suggesting that borrowers probably did not obtain higher-paying jobs to repay their loans; and (5) G.S.L.P. debt levels did vary by occupations, with engineers having higher debt levels and marketing and sales personnel having lower debt levels—but engineers earned more and marketing/sales personnel earned less, so their relative situations were similar."

[Dennis J.] Martin reported similar findings from a national sample of borrowers in repayment.

"In general terms, student loans do not appear to have as much adverse impact on borrowers in repayment as many of us, perhaps somewhat viscerally, would have thought. With the exception of the degrees to which loan payments affect their ability to save, the average responses expressed by these borrowers in repayment fall well short of the midpoint in the response range for such value judgments as: the degree to which loan debt affects the decision to marry, to start a family, to take a higher paying job rather than one in a preferred field, to postpone health care, to rent instead of purchase a home, or to drive a used car rather than a new one."

[Kathleen W.] Little reported no significant differences among borrowers and non-borrowers in the classes of 1979 and 1984 at the University of California at Santa Cruz in their patterns of marrying, having children, attending graduate school, buying a house, or owning a car.

All of these studies have problems. Those reported by Davis and Martin are old; they report on students who completed school before the large borrowing years of the 1980's. Martin's results are based on a survey that suffered from a very low response rate and that omitted defaulters from its sample, though borrowers who fail to make their payments might be considered the ones where student loans would have had the greatest impact on later economic decisions. Both Davis and Little (at least for the Class of 1984) surveyed students within a year or so of graduation; perhaps negative economic effects take longer to appear.

Evidence that has been cited in arguing that student loans *do* affect later decisions unfortunately suffers from shortcomings of its own. Neither the Carnegie Foundation nor American Council on Education surveys, for example, that imply that comparatively high borrowing levels influence career choice adequately distinguishes between cause and effect: do students borrow more when they expect to enter high-paying fields or do they enter high-paying fields because they have large debts to repay?

These are important questions, especially as debt levels of undergraduates rise. Much more and methodologically more sound research is needed to draw meaningful conclusions, however.

Even though it is virtually impossible as yet to disentangle the knotty question of how much debt students can afford to take on without adverse consequences, however, it is possible to demonstrate that, at the point of borrowing under loan programs as presently constituted, students *cannot* know what the real burden of the debt they are assuming will be.

How burdensome loans will be during the repayment period is a function of not only how much is borrowed, but also how much the borrower earns and what is happening in the economy at large during repayment, especially to the general level of prices. Inflation, scourge though it may be in many ways, is the friend of debtors with fixed interest obligations, who can repay what they owe in devalued dollars. Students, especially undergraduates, deciding on whether or how much to borrow, however, are not in any position to know how all these factors will interact to determine the real burden of their indebtedness. As they start school, they cannot be sure of completing their program of study; many will drop out along the way. Most of them will not know with any certitude what careers they will end up pursuing. With borrowing becoming more commonplace, more borrowers will end up having at best just average, rather than above average, income prospects, at least as compared to others with similar educational backgrounds. And future economic conditions, including levels of real wage increases and inflation, are not only beyond their knowing, but beyond the knowing of our most sophisticated economic forecasters as well.

Using a simulation model called the Student Loan Counselor, developed by Dwight Horch of the Educational Testing Service, it is possible to illustrate how variations in the unpredictable circumstances facing student borrowers can affect the burden of student loan repayment. In considering the examples, it is useful to keep in mind as rough benchmarks the following: (1) the debt manageability studies showing the "acceptable" debt repayments ranged from 3 to 15 per cent of pre-tax income; and (2) Johnson and Sullivan's findings that, while consumer credit is easy to find, many banks report the use of guidelines that limit the ratio of mortgage debt service/pre-tax income to 25-28 per cent of income and total mortgage and consumer debt/pre-tax income to 40 per cent, with the latter figure sometimes ranging up to 60 per cent.

The results of the simulations appear in Tables 13, 14, and 15. Seven illustrative borrowers are described there, each of whom borrowed $10,000 in G.S.L.'s with an 8 per cent interest rate in the course of obtaining a bachelor's degree, putting them among the most heavily indebted of today's undergraduates. Each student graduated in 1985 and got a job within a few months. Starting salaries are based on data in Horch's model for 1985, with $18,800 the average for liberal arts and business administration graduates. The loans must be paid back in equal monthly installments over a ten-year period, beginning 6 months after graduation.

Table 13 indicates the influence of income and inflation growth rates on loan burden. [Frank S.] Levy and [Richard C.] Michel have shown how real earnings prospects for men aging from 25 to 35 changed over two recent decades, growing roughly 7 per cent annually in the period 1963-1973 but only about one and a half per cent in the period 1973-1983. The first two students in Table 13, Aaron and Betty, generally illustrate these two real income growth rates. Inflation, however, was low in the first period and high in the second, circumstances that are also reflected in the simulations for Aaron and Betty respectively. The net result is that their loan burden is about the same, demonstrating the fact that, as far as loan repayment is concerned, inflation and real income increases are equally beneficial.

The third case in Table 13, Colin's, shows how debt burdens are higher if both inflation and real income increases are low, as is currently true in the United States. Dana's case is reflective of what might happen if the nation is able to improve earnings somewhat while keeping inflation under control. While none of these repayments would restrict the borrowers' ability to qualify for a mortgage, they affect in different degrees the capacity of a prudent individual to take on additional consumer debt. In no case is additional consumer borrowing ruled out altogether, however.

Table 14 holds student borrowing and economic conditions constant while varying starting salaries. Erin has the typical starting salary of a new teacher in some jurisdictions, Frank the salary of the average liberal arts graduate, and Grace the salary of a new engineer. The teacher clearly has the heaviest burden and, if she should want to buy a house in the years soon after graduation, might feel it unwise to borrow for other purposes. In these first few years, she will have to use twice the percentage of her salary to repay her student loans as will the engineer.

Table 15 shows the same three students as Table 14, but now assuming that they do not all borrow equal amounts but vary their borrowing to reflect their expected choice of career. In addition, the three careers are assumed to have different earnings prospects from year to year. This table shows that students can equalize their debt burden more than in Table 14 by borrowing less if they expect to enter less lucrative careers; this means, however, that they do not have in fact equal access to loans to help pay for higher education. How, then, can we summarize these diverse findings on student loans and individual well-being?

► Growing student indebtedness has raised fears that repayment obligations are threatening the economic well-being of those who borrow to pay for college. While a number of studies speak to aspects of this issue, they are often old or flawed and come to contradictory conclusions.

► High levels of debt do not appear to be the culprit in loan default. Rather, high default rates occur disproportionately among students who borrow only once or twice, whose cumulative indebtedness is relatively low, who stay in school for only a year or two, and who fail to obtain their degrees or certificates, characteristics that also correlate with lower incomes than those earned by individuals who receive bachelor's degrees.

► Attempts to define "manageable debt limits" for students have resulted in diverse findings and have numerous shortcomings that hamper their usefulness.

► Highly-indebted borrowers with below-average earnings might find their later ability to obtain home mortgages hindered because of restrictions often used by mortgage lenders, but the credit market does not appear to place meaningful limits on borrowers' ability to obtain consumer credit in large amounts.

► This absence of meaningful limits in the credit market suggests that educational and financial institutions that provide student loans have a responsibility to educate their often young and financially-inexperienced clients about managing credit so that they do not get themselves in over their heads financially when they leave school.

► There is little evidence that past borrowers are choosing high-paying

Table 13: Comparison of Loan Burden Under Various Economic Assumptions

Assumptions	Borrower Aaron	 Betty	 Colin	 Dana
Total GSL borrowed	$10,000	$10,000	$10,000	$10,000
Starting salary	$18,800	$18,800	$18,800	$18,800
Expected annual real income growth	7%	2%	2%	5%
Expected annual increase in CPI	4%	8%	3%	3%
Year of repayment	**GSL repayments as percentage of pre-tax income**			
1	7.7%	7.7%	7.7%	7.7%
2	7.0%	7.2%	7.4%	7.2%
3	6.2%	6.8%	7.0%	6.8%
4	5.6%	6.3%	6.7%	6.1%
5	5.1%	5.9%	6.4%	5.7%
6	4.5%	5.5%	6.1%	5.2%
7	4.1%	5.1%	5.8%	4.8%
8	3.7%	4.8%	5.5%	4.5%
9	3.3%	4.5%	5.2%	4.1%
10	3.0%	4.2%	5.0%	3.8%

Table 14: Comparison of Loan Burden Under Various Economic Assumptions

Assumptions	Borrower Erin	 Frank	 Grace
Total GSL borrowed	$10,000	$10,000	$10,000
Starting salary	$13,500	$18,800	$26,100
Expected annual real income growth	3%	3%	3%
Expected annual increase in CPI	4%	4%	4%
Year of repayment	**GSL repayments as percentage of pre-tax income**		
1	10.8%	7.7%	5.6%
2	10.1%	7.2%	5.2%
3	9.4%	6.7%	4.9%
4	8.8%	6.3%	4.5%
5	8.2%	5.8%	4.2%
6	7.7%	5.5%	4.0%
7	7.1%	5.1%	3.7%
8	6.7%	4.8%	3.4%
9	6.2%	4.5%	3.2%
10	5.8%	4.2%	3.0%

Table 15: Comparison of Loan Burden Under Various Economic Assumptions

Assumptions	Borrower Erin 2	 Frank 2	 Grace 2
Total GSL borrowed	$ 7,000	$ 8,500	$10,000
Starting salary	$13,500	$18,800	$26,100
Expected annual real income growth	2%	3%	4%
Expected annual increase in CPI	4%	4%	4%
Year of repayment	**GSL repayments as percentage of pre-tax income**		
1	7.5%	6.5%	5.6%
2	7.1%	6.1%	5.2%
3	6.7%	5.7%	4.7%
4	6.2%	5.4%	4.4%
5	6.0%	5.0%	4.1%
6	5.8%	4.7%	3.8%
7	5.3%	4.4%	3.5%
8	5.0%	4.1%	3.2%
9	4.7%	3.8%	3.0%
10	4.4%	3.5%	2.8%

careers or delaying marriage and childbearing as a result borrowing to pay for education, though this issue needs much more research that reflects the experience of student borrowers of the mid-1980's, who have borrowed more than earlier graduates.

► Under loan programs as presently structured, students cannot know what the real burden of the debt they are assuming will be. The proportion of later income that individuals will have to devote to student loan repayment rather than to other consumption or saving depends on a variety of factors (ultimate career choice, the prospects for real income increases, and the outlook for inflation) that cannot be reliably predicted by an undergraduate at the time of borrowing.

► Poor productivity growth and lagging incomes in the economy at large will increase the burden of student borrowing. Inflation, on the other hand, while signaling an economy in trouble, lessens the burden of debts with fixed interest rates, which can be paid back in devalued dollars. Relative to student borrowers in the 1960's and 1970's, today's student loan repayers would be most disadvantaged by a combination of low inflation and low real income increases, a situation characteristic of a stagnant economy.

V. Student Loans and Educational Opportunity

The federal government launched its major student aid programs (embodied in Title IV of the Higher Education Act of 1965) at the height of the War on Poverty. The primary rationale for federal action (and for much of state and institutional aid as well) was and continues to be the need to equalize educational opportunity for traditionally underrepresented groups in higher education: lower-income individuals, minorities, and women.

Concern is mounting that this educational opportunity goal is being threatened by an increasing imbalance in the student aid system between loans and grants; that is, between aid that has to be repaid and that which doesn't. Hard evidence to support or refute this concern is unfortunately difficult to find. Nevertheless, it is clear that whether or not traditionally-disadvantaged students are discouraged from participating in higher education because of the swing toward loans as the major form of available assistance, they will find the burden of loan repayment heavier than their white male counterparts because of continuing disparities in income. Thus loans are not as fair, in the sense of being neutral among different types of students, as are outright grants. Moreover, G.S.L. as currently structured has become increasingly costly to the federal government, which makes this largest of student aid programs a vulnerable target in times of high federal deficits.

To develop these points further first requires some information about available student aid and about how the sources and forms of this aid have shifted over time. As Table 16 shows, in academic 1985-86, $20-billion in various kinds of assistance was available to students at all levels in postsecondary education. The federal government was by far the dominant provider, supplying three-quarters of the total. Thus changes in federal policy, and particularly shifts in emphasis between grants and loans, colored the entire student aid picture.

In 1985-86 almost all federal aid came through the Title IV (or "generally available" aid) programs, but this was not always the case. In the early 1970's, two "specially-directed aid" programs, Social Security student benefits and veterans' educational benefits, accounted for more student assistance than all the Title IV programs. While not intentionally focused on lower-income or disadvantaged students, Social Security and Vietnam-era veterans' benefits probably disproportionately benefited these groups. Both provide outright grant aid.

Two major changes have occurred in federal student aid and thus aid as a whole, both with implications for educational opportunity. First, in the early 1980's inflation-adjusted student aid dropped. Table 17, a constant-dollar version of Table 16, shows a 14-per-cent drop in aid from federally-supported programs between 1980-81 and 1985-86, due entirely to the disappearance of Social Security student benefits and a large decline in aid for veterans. Generally-available federal aid, after suffering a decline in inflation-adjusted dollars in the early 1980's, bounced back somewhat by 1985-86. Thanks more to large real increases in state and institutional grant aid, however, the drop in overall aid available was held to 7 per cent. At the same time that overall aid was declining, however, college costs were rising faster than inflation and real family incomes (Table 18).

The second change is in the balance between types of assistance. Table 19 shows how the proportions of total aid being made available as grants, loans, and work-study have changed. From a high of 80 per cent of all aid in 1975-76, grants declined to 48 per cent 10 years later. Loans now represent almost half of all available aid, up from 17 per cent 10 years earlier.

This shifting balance raises concern over effects on educational opportunity. It is often argued that students from low-income families, minorities, and women are more reluctant to borrow than are white males, though the evidence here is ambiguous. It is clear, however, that these groups earn less than their white male counterparts once they enter the full-time work force, so that the burden of loan repayment will be heavier. Thus, loans, unlike grants, are not neutral among different types of students.

Campus based financial aid officers often report that students from disadvantaged backgrounds, particularly minorities, are reluctant to borrow. [Frank] Newman reiterates this theme, arguing that, "Disadvantaged students find large loans onerous. Minority students, in particular, are less likely to use loans and therefore less likely to enter or stay in college."

A Consortium on Financing Higher Education (COFHE) survey of families in four cities found that women, low-income students, and students with high degree aspirations showed the most concern about undertaking educational debt. Some data suggest that women borrow less often and in lower amounts than men.

Female enrollments have reached all-time highs (women now are the majority of postsecondary students), but black enrollment has been declining, fueling speculation that rising dependence on student aid in the form of loans discourages blacks from participating in higher education. At the same time, there is some evidence that those minority and women students who do enroll are in fact willing to borrow. An unpublished COFHE survey of students graduating from member schools (COFHE represents 30 prestigious private colleges—admittedly not a representative group) in 1984 found that gender had no relationship to loan indebtedness and that blacks were more likely to report that loans were a major source of funds and a source of funds than were other students.

Women reported more often than men that they expected their parents to help with loan repayments; minorities' expectations of such assistance were noticeably lower.

A study of students enrolled in all sectors of California postsecondary education in 1982-83 had similar results. Virtually identical percentages of men and women applied for guaranteed student loans and blacks applied almost twice as often as whites, undoubtedly reflecting their lower family incomes and greater financial need.

If further analysis should show that minorities and/or women react differently to the possibility of borrowing to pay for college than white men, this would be an understandable response to a continuing fact of economic life in America: that significant wage disparities still exist between these groups and white men. Even when such differences as educational attainment, full-time versus part-time work, years of experience, and occupational choice are controlled for, earnings disparities show up. This is not the place for an exhaustive enumeration of comparative statistics, but the few basic numbers in Table 20 give a rough sense of the differences that also show up in more detailed and sophisticated comparisons.

Table 21 shows the difference such disparities can make to workers repaying student loans. The three examples represent (1) a white male (Harry) whose starting salary is the average for liberal arts baccalaureate holders; (2) an individual (Irene) whose starting salary is 70 per cent of the liberal arts average; and (3) an-

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Table 16: Aid Awarded to Postsecondary Students in Current Dollars (in millions)

	Academic year			
	1970-71	1975-76	1980-81	Estimated 1985-86
Federally supported programs				
Generally available aid				
Pell grants	$ 0	$ 936	$ 2,387	$ 3,652
SEOG	$ 134	$ 201	$ 366	$ 396
SSIG	$ 0	$ 20	$ 76	$ 76
CWS	$ 227	$ 295	$ 658	$ 693
NDSL	$ 240	$ 460	$ 695	$ 751
GSL and PLUS	$ 1,015	$ 1,267	$ 6,201	$ 8,836
(GSL)	($ 1,015)	($ 1,267)	($ 6,187)	($ 8,288)
(PLUS)	(n/a)	(n/a)	($ 14)	($ 548)
Subtotal	$ 1,616	$ 3,179	$10,384	$14,404
Specially directed aid				
Social Security	$ 499	$ 1,093	$ 1,883	$ 0
Veterans	$ 1,121	$ 4,180	$ 1,714	$ 667
Other grants	$ 16	$ 63	$ 119	$ 48
Other loans	$ 42	$ 45	$ 61	$ 248
Subtotal	$ 1,678	$ 5,381	$ 3,777	$ 963
Total federal aid	$ 3,295	$ 8,560	$14,161	$15,367
State grant programs	$ 236	$ 490	$ 801	$ 1,374
Institutionally-awarded aid	$ 965	$ 1,435	$ 2,138	$ 3,426
Total federal, state, and institutional aid	**$ 4,496**	**$10,485**	**$17,101**	**$20,167**

Note: n/a = Not applicable.

Table 17: Aid Awarded to Postsecondary Students in Constant 1986 Dollars (in millions)

	Academic year			
	1970-71	1975-76	1980-81	Estimated 1985-86
Federally supported programs				
Generally available aid				
Pell grants	$ 0	$ 1,897	$ 3,098	$ 3,742
SEOG	$ 378	$ 407	$ 475	$ 406
SSIG	$ 0	$ 40	$ 99	$ 78
CWS	$ 643	$ 598	$ 855	$ 710
NDSL	$ 680	$ 932	$ 902	$ 770
GSL and PLUS	$ 2,872	$ 2,567	$ 8,049	$ 9,054
(GSL)	($ 2,872)	($ 2,567)	($ 8,031)	($ 8,493)
(PLUS)	(n/a)	(n/a)	($ 18)	($ 562)
Subtotal	$ 4,574	$ 6,441	$13,478	$14,760
Specially directed aid				
Social Security	$ 1,412	$ 2,214	$ 2,444	$ 0
Veterans	$ 3,173	$ 8,468	$ 2,225	$ 683
Other grants	$ 45	$ 128	$ 154	$ 49
Other loans	$ 119	$ 91	$ 79	$ 254
Subtotal	$ 4,748	$10,901	$ 4,902	$ 987
Total federal aid	$ 9,322	$17,342	$18,381	$15,747
State grant programs	$ 668	$ 993	$ 1,040	$ 1,408
Institutionally-awarded aid	$ 2,730	$ 2,907	$ 2,775	$ 3,510
Total federal, state and institutional aid	**$12,720**	**$21,241**	**$22,195**	**$20,665**

n/a = Not applicable.

Table 18: College Costs and Family Incomes in Current and Constant Dollars, Selected Years

	Academic year			
	1970-71	1975-76	1980-81	1985-86
Current dollars				
Cost of attendance[1]				
Private university	$ 3,163	$ 4,467	$ 6,566	$11,100
Private 4-year college	$ 2,598	$ 3,385	$ 5,249	$ 8,480
Public university	$ 1,478	$ 1,935	$ 2,711	$ 4,160
Public 4-year college	$ 1,209	$ 1,657	$ 2,420	$ 3,750
Public 2-year college	$ 1,017	$ 1,386	$ 2,020	$ 3,000
Income[2]				
Disposable personal income per capita	$ 3,489	$ 5,291	$ 8,422	$11,817
Median family income	$ 9,867	$13,719	$21,023	$27,735
Constant 1986 dollars				
Cost of attendance[1]				
Private university	$ 8,949	$ 9,050	$ 8,523	$11,374
Private 4-year college	$ 7,351	$ 6,858	$ 6,813	$ 8,689
Public university	$ 4,182	$ 3,920	$ 3,519	$ 4,263
Public 4-year college	$ 3,421	$ 3,357	$ 3,141	$ 3,843
Public 2-year college	$ 2,877	$ 2,808	$ 2,622	$ 3,074
Income[2]				
Disposable personal income per capita	$10,101	$11,051	$11,490	$12,349
Median family income	$28,566	$28,655	$28,681	$28,983

[1] Cost of attendance includes tuition, fees, room, and board.
[2] Income data are for the calendar year in which the academic year begins.

Table 19: Grants, Loans, and Work as a Percentage of Total Aid

	Academic year			
	1970-71	1975-76	1980-81	Estimated 1985-86
Grants	66.1%	80.3%	55.5%	47.8%
Loans	28.9%	16.9%	40.7%	48.8%
Work	5.0%	2.8%	3.9%	3.4%
Total aid	100.0%	100.0%	100.0%	100.0%

Table 20: Median Incomes of Full-Time, Year-Round Workers by Educational Attainment, 1984

	1-3 years of college	4 years of college
Males, all races, age 25-34	$22,260	$25,754
Females, all races, age 25-34	$16,152	$19,068
White males, age 25 and over	$26,302	$32,022
Black males, age 25 and over	$21,105	$25,110
White females, age 25 and over	$17,114	$20,291
Black females, age 25 and over	$15,795	$20,626

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other individual (Jesse) whose starting salary is 85 per cent of the liberal arts average. The figures of 70 and 85 per cent were chosen for illustration because they reflect the disparities frequently found in the statistics when comparing earnings of women and minorities who work full time to male counterparts of similar educational and occupational experience. The cases of Irene and Jesse illustrate how much more of their incomes workers with less-than-average income prospects will have to devote to loan repayment rather than to other spending over the 10 years after they leave school.

Loans, then, unlike grants, are not neutral in their effects on different groups of students. Also unlike grants, the G.S.L. program depends on interest rate subsidies to encourage banks and other private lenders to participate and operates as an "entitlement" for eligible students. As a result of liberalized eligibility rules in the 1970's and rising interest rates in the general economy, G.S.L. became an increasingly expensive but unpredictable commitment for the federal government. Changes in 1981 and 1986 imposed new eligibility restrictions and reduced somewhat the government subsidies involved in G.S.L., but the program's basic structure still results in costs that are highly sensitive to outside economic forces.

[Arthur M.] Hauptman and [Michael S.] McPherson describe how this structure evolved and argue that G.S.L.'s high and volatile costs make the program vulnerable in an era when federal expenditures must be reduced to bring budget deficits under control. Another spurt of inflation such as occurred in the early 1980's would drive federal obligations up dramatically: by roughly half a billion dollars annually for each 1-per-cent increase in the Treasury bill rate to which G.S.L. subsidies are tied. One has to wonder just how long the federal government will or should tolerate this kind of financial uncertainty without seeking cost-cutting changes in the program. Such changes could have serious implications for educational access, given the critical role G.S.L. now plays in educational finance for those whose resources are otherwise inadequate to pay for college.

The Higher Education Act reauthorization in 1986 restricted eligibility for G.S.L.'s to students who can demonstrate financial need, a reasonable step in light of the subsidies now involved, But it is a step fraught with irony as well, given the view twenty years ago that the federal government should provide a balanced array of grants, loans, and work opportunities for the disadvantaged and minimally-subsidized loans of convenience for the middle class. The evolution of G.S.L. into the dominant student aid program, combined with increasing levels of subsidy, have gradually and in a largely unexamined way transformed the federal strategy for using financial assistance to foster equality of opportunity in higher education. This effort is now highly dependent on loans, with uncertain implications for those disadvantaged students who were the original focus of federal concern.

How can we summarize the relationship between student loans and educational opportunity?

► Heavy emphasis on borrowing may discourage traditionally-underenrolled groups from participating in higher education and hinder the nation's progress toward equal opportunity, though here, as in so many other areas of student aid, the evidence is mixed.

► Women, minority, and low-income students have traditionally been seen as reluctant to borrow. Though female enrollments have increased steadily, black enrollment is dropping. There is much speculation, but little hard data yet to prove, that the shift in student aid policy from heavy reliance on grants to a roughly 50/50 balance between grants and loans, coupled with real declines in student aid available from federal sources, has contributed to this decline.

► Individuals from traditionally-disadvantaged groups who actually enroll in college (as opposed to those who may be discouraged from doing so) may be as willing to borrow as other students, and in fact may be more dependent on loans because they have fewer other resources.

► Because of continuing disparities in income between white males, on the one hand, and women and minorities on the other, even after adjusting for differences in education and work experience, the latter will find loans more burdensome to repay. In this sense, loans, unlike grants, are not neutral in their effects on different groups.

► As G.S.L. has evolved over 20 years, it has changed from a minimally-subsidized loan of convenience for middle-income families to a highly-subsidized loan for students who can demonstrate financial need. It has also become the dominant student aid program. Thus the federal strategy for fostering equality of opportunity in higher education, which initially focused on a balanced array of grants, loans, and work opportunities for the disadvantaged, has been transformed, with uncertain and largely unexamined implications for the groups who were the original focus of federal concern.

Table 21: Comparison of Loan Burden Under Various Economic Assumptions

Assumptions	Borrower		
	Harry	Irene	Jesse
Total GSL borrowed	$10,000	$10,000	$10,000
Starting salary	$18,800	$13,160	$15,980
Expected annual real income growth	3%	3%	3%
Expected annual increase in CPI	4%	4%	4%
Year of repayment	GSL repayments as percentage of pre-tax income		
1	7.7%	11.1%	9.1%
2	7.2%	10.3%	8.5%
3	6.7%	9.6%	7.9%
4	6.3%	9.0%	7.4%
5	5.9%	8.4%	6.9%
6	5.5%	7.8%	6.5%
7	5.1%	7.3%	6.0%
8	4.8%	6.8%	5.6%
9	4.5%	6.4%	5.3%
10	4.2%	6.0%	4.9%

VI. Student Loans and Education

Before any final conclusions can be reached about the effects of the nation's growing reliance on student loans, yet another issue needs to be addressed: whether loans have implications for the educational process itself. Two kinds of effects seem to be of concern here, tangible ones like whether borrowing affects the choice of major or graduate school plans, and intangible ones relating to educational "values." The tangible effects are easily understood. Marchese gives a good summary of the concerns about values:

"What educational values are prompted by loans? Instrumental values, I believe, values inimical to liberal education, and personalist values, likewise inimical.

"Instrumental values are fostered by loans because loans force a responsible student to think ahead to the necessity for repayment: the incentive of loans is to position yourself through your coursework, major, and degree for a higher-paying job that more readily permits repayment of the loan. In effect, college becomes less and less something done for its own sake and more and more something done for what comes afterwards. Now that is not entirely an unhealthy impulse; but the greater the instrumental purpose the less likely will the student be to 'dally' with the contemplations of liberal and civic learning or 'sacrifice' to develop general intellectual capacity.

"I say 'personalist' because the message to students of loans (as opposed to scholarships, grants, work, and parental contribution, each of which I think carries a more positive set of values with it) is that, 'you go forward on your own nickel.' The response too often evoked becomes, 'I am going to get what is coming to me.' This is what Frank Newman meant in his report last September when he charged that 'excessive loans inadvertently undercut traditional values.' "

Like many other loan issues, this one is complicated. Even more so than on some, the jury is still out. The best this paper can do is to give a sense of the debate and of the evidence on both sides.

First of all, it is worth pointing out that the debate over whether different ways of paying for college affect the educational experience itself is not new. Concern seems to focus on whatever financing mechanism is currently in the spotlight. In 1952 [Richard G.] Axt noted that the boast, " 'I worked my way through college' has been a part of the traditional success story of the self-made man," a tradition boosted by the tough Depression years. Axt also reported, however, that many educators had reservations about the effects of work—especially if it required more than 15 hours per week—on a student's academic and personal life. During the 1950's when Congress was considering proposals to enact the first federal scholarships, critics worried that outright gift aid would negatively affect students' commitment to their studies, in contrast to requirements that they help themselves. Today, with lending at an all-time high, we worry about loans.

Conducting research on the effects of different kinds of financial aid is not easy. As Newman observes, such research is hindered by "the widespread use of aid packages, which introduces the problem of multi-collinearity into statistical analysis." One summary of the "limited" research on financial aid and educational outcomes tentatively concludes that "grants and scholarships have small positive effects on retention and loans generally have negative impacts." A study of new students at a large commuter university by [Richard A.] Voorhees however, found "no support . . . for the claim that loans are detrimental to the persistence of high need freshmen." In addition to such contradictory results, few studies have as yet been done that would capture the effects of the high borrowing of recent years.

One that does is the COFHE survey of the class of 1984 at member schools. While students at these schools (30 of the most expensive and selective undergraduate institutions in the country) are not representative of postsecondary students as a whole in their academic accomplishments, career and income prospects, and so on, they also borrow more frequently and more heavily than most students, as Table 5 in section II showed. Nevertheless, the survey found no evidence of any relationship between undergraduate indebtedness and post-graduation plans, such as attending graduate school or going directly to work. Both this study and a 1984 Carnegie survey show that student borrowing varies by field of study, but neither report shows a formal link between indebtedness and choice of major.

If it is hard to disentangle the tangible effects of different kinds of student aid, it is almost impossible to do so in the area of effects on values. To give but one example: are today's students more preoccupied with economic issues than students of an earlier era because they have to borrow more heavily, or because they are aware that the national economy has been relatively stagnant for over a decade, with some parts of the country suffering from depression-like conditions? Given all the public concern over the state of the economy in recent years, what would be surprising would be to find no tendency for students to be more concerned about their financial futures.

Furthermore, it isn't true that students who receive loans are being told to "go forward on your own nickel." If anything, the message is "you put in two and a half cents and the government will match it;" the subsidy on G.S.L.'s has been 40 to 50 cents for each dollar lent. While students may not be completely aware of the "gift" aspect of loan subsidies, they cannot help but know that some kind of government subvention has been allowing them to borrow at 7 or 8 or 9 per cent during years when general interest rates have been much higher.

Finally, some students apparently prefer loans to work as a form of aid. [James C.] Hearn and [Sharon L.] Wilford quote Robert Fenske's finding that "aid officers report that certain students for whom grants are not available tend to prefer loans to work-study awards because they believe low-paying jobs interfere with obtaining good grades and completing their programs in timely fashion."

In sum, then,

► Concern is mounting that rising debt levels may affect students' choice of major and graduate school plans and the values they bring to and take from their college educations.

► Much more evidence is needed to draw firm conclusions in this area, including efforts to disentangle the effects of loans from other changes in society at large.

VII. The Risks of Borrowing: An International Comparison

Section IV concluded by noting the uncertainties about future loan burdens that students fact when they borrow because of the unpredictability of both income after graduation and the state of the economy. For the borrower, loans are an investment that carries with it some risk. [Gareth] Williams has articulated this point more fully.

"Higher education as an investment has several characteristics that distinguish it from most other forms of investment: the investment takes a long time to complete, the returns are long-term, and, for any individual, they are very uncertain. So individual investors cannot afford to make mistakes; but at the same time they are not well informed about the implications of different decisions, and most of them are not in a position to make this investment decision more than once. Most successful loan schemes skirt these difficulties by having some form of income-contingent repayment arrangement: the amount a graduate repays in any year depends on his current income. Thus students need not be deterred from borrowing to finance their studies by the fear that their personal investment will be one of the unsuccessful ones. Put another way, an element of insurance is built into the loan schemes."

While Williams overstates the prevalence of such insurance—the United States and Canada both have successful student loan programs with no formal protections except for death and disability—[D. Bruce] Johnstone provides examples of two countries that do protect students against some of the risks of borrowing: Sweden and West Germany.

In Sweden, as in most of Europe, postsecondary students are not charged tuition or fees but do have to pay living expenses while enrolled in school. Parents are not formally expected to contribute to their children's education, though many do; students are eligible based on their own resources for "Study Means" from the government. Study Means consists mostly of a highly-subsidized loan and a small direct grant. In 1983-84, a little over half of Swedish undergraduates took advantage of the loan portion of Study Means.

Swedish students do not begin repaying their loans until two and a half years after graduation, in contrast to six months in the United States.

In addition to the fact that they are better established in careers when they begin repayment, Swedes also have until their 51st birthdays to repay, in contrast to our 10 years.

The exact period of repayment thus varies with the age of the borrower when he or she enters repayment.

At this point, interest at the rate of 4.2 per cent, which has been accruing during the in-school and post-graduation "grace period" is added to the loan principal to determine the total to be repaid.

This total is divided by the number of years remaining until age 51 to determine the first year's repayment. Each year thereafter, the repayment amount is increased by 4.2 per cent, thus giving Swedish borrowers a graduated repayment plan rather than the level repayments characteristic of U.S. student loans.

In addition to a longer repayment period and graduated payments, a Swedish borrower gets an explicit guarantee against the risk of being overburdened by low income. Debt payments are deferred if the borrower falls below a specified level of financial resources, which include among other things 40 per cent of a spouse's earnings above a certain point. This 40 per cent increases as the spouse's earnings increase. The level of financial resources that triggers the right to defer payment is variable, being higher if the borrower has children under the age of ten. If as a result of deferrals, the borrower still owes money on a student loan at age 65, the debt is forgiven.

West Germany also has a highly-subsidized loan program called the BAföG to help students pay living expenses. This all-loan program was converted from a largely-grant program in 1984. Probably to make the switch palatable, repayments do not begin until five years after graduation and there is no interest charged at any point. About 30 per cent of German students qualify on the basis of their or their parents' income for this assistance.

Under BAföG a borrower has 20 years to repay and makes equal monthly payments. If his or her income (not considering the income of a spouse) falls below a specified level, payments are deferred. Any remaining debt is canceled after 20 years.

It is worth noting that BAföG in its current form is new and that no students have yet entered repayment. Therefore the German example is not helpful in terms of experience with how its various loan provisions will work out in practice.

Sweden and West Germany do illustrate how various loan features to reduce the risks of unmanageable debt can be designed. These two countries have chosen to subsidize their loan programs more heavily than the United States, but features like graduated repayment, long repayment periods, longer grace periods, and protection against low incomes in theory could be built into less-subsidized programs as well.

In fact, the first two did exist in this country for a short period in the early 1980's under a provision allowing students to consolidate high or multiple loans through the Student Loan Marketing Association.

That loan consolidation authority lapsed in 1983 but was restored in modified form (and with a variety of financial institutions and state agencies authorized to participate) when the Higher Education Act was reauthorized in October 1986.

That act also authorized a small income-contingent loan demonstration project within the N.D.S.L. program to assess the feasibility of a program in which students repay on a variable schedule geared to their adjusted gross incomes.

The issue of whether students could and should be better protected against the risks of borrowing deserves attention.

Loan consolidation may take care of many of our concerns about high indebtedness levels, but will not protect students who borrow at lower levels from the risk that low incomes may force them to commit comparatively high proportions of their resources to loan repayment.

It would be easier to assure groups that are often considered reluctant to borrow, such as minorities and women, that their fears were unfounded if loan programs in fact had protections built into them, which they now do not.

To address head-on the question of cost that would immediately arise should income protection be added to G.S.L., perhaps we should consider whether the current G.S.L. structure of below-market interest rates, subsidies, and fees is optimal. Instead of subsidizing all borrowers based on their or their parents' income at the time the loan is made, may be we should allow all students to borrow at market rates and then use subsidies to offer protection against repayments that are out of proportion to income. As this proposal demonstrates, there are innovative ideas that could be explored, short of starting whole new programs such as the National Student Loan Bank income-contingent loan plan and its variants that have surfaced at various times over the past two decades to insure that student loans will not become the huge burdens so often talked about today.

Furthermore, we need to know more about what kinds of protections student borrowers really want. [Rena] Cheskis-Gold's 1984 survey of alumni of Yale University's Tuition Postponement Option program of the 1970's, one of the few true income-contingent long-term loan programs ever implemented in this country, offers some suggestive findings. While students like low repayments in the early years of work and the income contingency and graduated repayment features of T.P.O., they disliked very long repayment periods (in T.P.O., up to 35 years). Cheskis-Gold's work indicates that the optimal loan program might have moderate payments over a somewhat longer period than currently allowed under G.S.L. and N.D.S.L., rather than small payments over a lifetime, and would offer some protection when incomes are low relative to debt payments.

To summarize, then, how does the United States stack up in protecting students against the risks of investing in themselves through loans?

► Unlike some European countries, the United States does not build into its loan programs insurance protecting a student borrower from the danger that his investment in himself through education will not result in a level of income sufficient to permit comfortable repayment of the loan.

► Loan consolidation, a feature of U.S. loans which was initiated in the early 1980's but allowed to lapse, was resurrected in the 1986 Higher Education Act reauthorization. It will allow borrowers with large or multiple student loans to pay them over an extended period of time and may offer graduated repayment, but is not a protection for all borrowers against the risk that loan repayment will require an unduly high proportion of income.

► The issue of whether students could and should be better protected against the risks of borrowing deserves attention: innovative ideas exist and need to be investigated, and better information is required about what kinds of protection borrowers and potential borrowers would like to have.

VIII. Conclusions

In December 1985 the College Scholarship Service of the College Board assembled approximately 50 loan experts (representing educators, students, bankers, and state loan-guarantee agencies) to discuss the problem of student debt burdens and its implications for loan counseling and debt management. Somewhat to the organizers' surprise, however, there was no consensus among those in attendance about what the "problem" was, or even if there *was* a problem. Perhaps this should have been expected, given the paucity of data about student loans and the diversity of American higher education, which makes it hard to give any answer except "it depends" to questions of how much students should borrow.

This paper both reflects those difficulties and gives an illustration of the gaps in knowledge and the conflicting findings that make consensus hard to reach. Better research, even if we had it, might not tell us what we need to know when we need to know it. Sometimes analysis is a conservative force, since it may be hard to document a problem until the problem becomes so serious that it is overwhelming.

Therefore, while we simply must find ways of obtaining better information than we currently have about our large and growing reliance on student loans to finance higher education, we must also pay attention to the perceptions and impressions of those who are making loans and counseling students and repayers and to the feelings of those who have borrowed. We must take these things seriously, but we must find ways to determine their validity.

Making good policy choices about the future of student loans in financing higher education depends on separating valid from invalid concerns about high borrowing levels. Despite the concerns, many people view student loans not as a problem but as a positive force (along with other student aid programs) in broadening access to college and in spurring the nation's economic and civic growth.

In consumer surveys going back as far as the late 1950's, respondents have listed "financing educational expenses" as either the second or (in the 1983 survey by a narrow margin) third most appropriate reason for borrowing.

Educational borrowing along with borrowing to cover the costs of illness and to purchase a car are the only reasons for borrowing that are approved by a majority of consumers, about 80 per cent of whom support these kinds of loans.

Structuring effective and efficient student loan programs requires attention to many issues in addition to the burden of indebtedness, though we must not neglect the latter. We also need to consider the implications of our growing reliance on loans as the central feature of federal efforts to promote educational opportunity and the appropriateness of loans for different kinds of students in different kinds of institutions. We should also look at whether the evolution of G.S.L. from a minimally-subsidized loan of convenience to a highly-subsidized loan for the financially needy is a backward step to the extent that it limits access to loans for students whose primary need is not subsidies but a means through which to invest in their own futures.

All of these Bonds having been sold, this announcement appears as a matter of record only

In the opinion of Orrick, Herrington & Sutcliffe, Bond Counsel, based on existing statutes, regulations, rulings and court decisions, and assuming compliance with certain covenants described in the Official Statement, interest on the Series 1986 Bonds is excluded from gross income for federal tax purposes and is exempt from California personal income taxes. In the opinion of Bond Counsel, interest on the Series 1986 Bonds is not a specific preference item for purposes of the federal individual or corporate alternative minimum taxes, although it is included in book income and current earnings in calculating corporate alternative minimum taxable income. See "Tax Exemption" in the Official Statement.

NEW ISSUE

$22,895,000

California Educational Facilities Authority

Revenue Bonds (Santa Clara University), Series 1986

Dated: December 1, 1986 Due: February 1, as shown below

The Series 1986 Bonds are issuable in fully registered form in denominations of $5,000 and integral multiples thereof. Interest on the Series 1986 Bonds is payable semiannually on each February 1 and August 1 commencing August 1, 1987 by check or draft mailed to the registered owners thereof. Principal of the Series 1986 Bonds is payable at the principal corporate trust office of Security Pacific National Bank in Los Angeles, California. The Series 1986 Bonds are subject to redemption as described in the Official Statement.

The Series 1986 Bonds are being issued by the Authority which will use the proceeds to make an unsecured loan to Santa Clara University. The University will use the funds to refinance certain costs of educational facilities, as more fully described in the Official Statement.

The Series 1986 Bonds are payable from the Revenues and other funds pledged under the indenture including payments required to be made under the Loan Agreement. The loan is a direct unsecured obligation of

Santa Clara University

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IS PLEDGED TO THE PAYMENT OF THE PRINCIPAL OF OR PREMIUM,
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PRINCIPAL AMOUNTS, MATURITIES, INTEREST RATES AND PRICES

$5,935,000 Serial Series 1986 Bonds

Principal Amount	Maturity	Interest Rate	Principal Amount	Maturity	Interest Rate
$105,000	1988	4.25%	$735,000	1993	5.40%
620,000	1989	4.50	775,000	1994	5.60
645,000	1990	4.75	820,000	1995	5.80
670,000	1991	5.00	865,000	1996	6.00
700,000	1992	5.20			

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The Series 1986 Bonds are offered by the Underwriter when, and as if issued by the Authority and accepted by the Underwriter subject to the approval of legality by Orrick, Herrington & Sutcliffe, San Francisco, California, Bond Counsel. Certain legal matters will be passed upon for the Underwriter by Bond Counsel, for the Authority by the Attorney General of the State of California and for the University by Latham & Watkins.

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L. F. ROTHSCHILD, UNTERBERG, TOWBIN, INC.

December 5, 1986

Give & Take

The headline on the newspaper advertisement was direct: "How to make your presence felt in the community."

One way to do that, readers of the message that followed learned, was to establish a charitable fund to be administered by a community foundation.

A toll-free telephone number was provided for readers interested in learning more, and 400 were—even though the ad ran only three times in both the New York *Times Book Review* and the Los Angeles *Times*.

The advertisement was the first salvo in a planned three-year campaign by the Council on Foundations, a national association of grant makers, to encourage wealthy people to consider foundations as a way to formalize their charitable giving and make it more systematic.

•

Major donors, whether they use a foundation or their personal checkbook to distribute their charitable gifts, have increased in recent years, according to one informal survey.

In the December issue of *Town & Country* magazine, which chronicles the life style and social activities of the wealthy, a listing of the most generous living Americans included 186 names, up from 113 when the publication first compiled an "honor roll" of donors in 1983. The "most generous" designation is accorded to those who have contributed at least $5-million to charity in their lifetime.

•

Paul Mellon, the magazine concluded, is *the* most generous living American—the only benefactor it identified who has been personally responsible for more than $300-million in charitable gifts.

Mr. Mellon is the principal living heir to one of the largest family fortunes in the United States. Among his major gifts to higher education was an $18-million center for British art at Yale University, from which he was graduated in 1929. He also gave the center a collection of art works and rare books said to be worth $150-million.

"As a philanthropist," noted *Town & Country*, "he's in a class by himself."

There were many others in Mr. Mellon's class when he was a student at the Choate School, now known as Choate Rosemary Hall, and it seems he made quite an impression on them. A spokesman for the school said that its 1925 yearbook indicated that Mr. Mellon's classmates had named him "most generous." They also voted him "most absent-minded."

Apparently he has had little difficulty remembering his alma maters. Mr. Mellon's most recent major gift to charity, made last month, was a $10-million contribution for a new science center at Choate Rosemary Hall. It will replace a building he financed in 1938 and will be located next to an arts complex he donated in 1972.

Philanthropy

Gardner on Leadership: Probing How to Deal with a World of 'Multiple, Colliding Systems'

In a project for Independent Sector, he is tackling the subject of leaders head-on for the first time

By PAUL DESRUISSEAUX

WASHINGTON

If it seems as if leadership is in short supply these days, John W. Gardner has some ideas why.

We are not doing enough to encourage the development of young leaders, he says, and we are not taking very good care of the leaders we have.

"I think we should all pay more attention to the kind of pressure we put on our leaders," he says. "I think we're burning them out faster than we need to."

As the director of a foundation-sponsored study of leadership, Mr. Gardner is spending a lot of time thinking about that subject and trying to illuminate aspects of it "that may be of use to us in facing our present dilemmas as a society and a species."

Drawing on Experience

Mr. Gardner has personal knowledge and experience to draw on. He has been president of the Carnegie Corporation of New York and of the Carnegie Foundation for the Advancement of Teaching; Secretary of Health, Education, and Welfare; and chairman of the National Urban Coalition. Founder of Common Cause, the citizens' lobbying group, he also was a co-founder of Independent Sector, a non-profit coalition of organizations that promotes charitable giving and volunteering, and for which he is conducting his current study.

Some observers of Mr. Gardner's career would say that he wrote the book on leadership.

Getting a book on leadership written, however, is something that Mr. Gardner is

Continued on Following Page

John Gardner: "Leaders today have no choice but to attempt to exercise leadership across boundaries."

PHOTOGRAPH FOR THE CHRONICLE BY BRUCE KATZ

Endowments Up 27 Pct. in Fiscal '86 for Second Straight Year of Big Growth

WASHINGTON

The value of college and university endowments went up 27.1 per cent in fiscal 1986, the second consecutive year of such marked growth, according to the preliminary findings of a national study.

Last year's increase followed a 25.4-percent rise in the value of the average endowment in fiscal 1985, the best back-to-back performances in a decade.

The figures represent the "total-return rates" for endowments and reflect changes in the market value of investments as well as interest and dividends.

Average Increase Beat Inflation

The findings are from a preliminary report of the annual study of endowment performance conducted by the National Association of College and University Business Officers.

For the average endowment, last year's increase outpaced inflation, which the Consumer Price Index set at 1.8 per cent and the Higher Education Price Index fixed at 4.4 per cent.

The 1986 increase was the second-highest one-year return on endowment since NACUBO began publishing the results of its endowment-performance studies in 1974. In fiscal 1983 the average endowment increased 41.3 per cent in value. The following year the value dropped 2.8 per cent.

The increase in the value of endowments for the three-year period ending last June was 16 per cent. The five-year increase was 16.5 per cent, and the increase over 10 years was 12.5 per cent.

In its preliminary report, NACUBO said the strong performance of endowments in 1986 had been expected, largely because of the rise in stock prices during the year.

Larger endowments, which the study classified as those worth $100-million or more, showed the greatest gains, primarily because they typically had a higher proportion of equity-related investments—including foreign securities and venture capital as well as common stocks.

"The higher the emphasis on equities during this period of sharply higher stock prices, the better the performance," the NACUBO report stated.

Combined Assets: $19.8-Billion

The preliminary report is based on information provided by 134 colleges and universities on 153 endowment pools. The combined assets of the endowments in the study was $19.8-billion, and the median-sized pool had assets of $41.8-million.

Investment pools of $100-million or more, which the study said were the most equity oriented, and those with 65 per cent or more in equity holdings had the highest returns—30 per cent or better. Those under $25-million, and those with less than 50 per cent of their holdings in equities,

Continued on Page 31, Column 1

Endowments Rise Sharply for Second Year in Row

Continued from Page 29

had the largest cash investments and the lowest average rate of return compared to other groupings—24.6 per cent or less. Investment pools worth between $25- and $100-million had a 26.1-per-cent return.

The average investment pool in the study had 55 per cent in equities, 31.1 per cent in bonds, 11.1 per cent in cash, 1.6 per cent in real estate, and the remaining 1.2 per cent in miscellaneous assets.

New Ways to Maximize Return

Bruce M. Dresner, director of investments at Dartmouth College and the performance analyst for the NACUBO study, said that in recent years there had been "a conscious effort by colleges and universities to find new ways to maximize the return on their investments, given the level of risk they are willing to undertake."

Mr. Dresner said more and more institutions had been looking at nontraditional areas of investment—foreign securities, for example. "A number of institutions with investments in foreign securities were able to score a double play in 1986," he explained. "The foreign security markets did well at the same time that the dollar dropped in value. About half of the total return achievable on foreign securities was due to the currency play."

He said "a fair number" of endowments included in the study had investments in foreign securities, and some had a relatively high percentage of their holdings in them. "Last year they would have been rewarded handsomely for such investments," he said.

Mr. Dresner said the purpose of the preliminary report was "to provide a 'quick check' for institutions, so that they can see how well they are doing relative to their peers, and to the median rate of return."

Although the complete report of the study will not be available until April, in past years the final figures have varied little from the preliminary findings.

The final report for 1986 is expected to include information on more than 250 endowments, more than in any previous year.

25 Pct. Are Public

"We believe we have the preponderance of all endowments now participating in the study," said Mr. Dresner. Any four-year institution with an endowment of $1-million or more may participate in the study. In 1985 about 25 per cent of the institutions in the study were public.

The final report will rank institutions in the study by endowment size and will include data on investment performance and endowment characteristics.

The study of endowments is a project of the NACUBO Financial Management Committee's subcommittee on investments.

—P. D.

Total Return on Endowments, Fiscal 1986*

	Periods ending June 30, 1986			
	1 year	3 years	5 years	10 years
All investment pools	+27.1%	+16.0%	+16.5%	+12.5%
By size				
$100-million or more	+30.1	+16.7	+17.9	+14.2
$25-million to $100-million	+26.1	+16.0	+16.5	+12.4
Under $25-million	+24.6	+15.2	+15.8	+11.4
By equity-related assets				
65% or more in equity	+31.8	+15.1	+16.6	+13.6
50% to 65% in equity	+28.4	+16.6	+16.9	+13.2
Under 50% in equity	+23.3	+15.1	+16.1	+11.3
Comparative measures				
Standard & Poor's 500 Index	+35.5	+19.1	+19.2	+14.5
Shearson-Lehman Bond Index	+20.4	+16.6	+19.7	+10.3
Consumer Price Index	+ 1.8	+ 3.2	+ 3.9	+ 6.8
Higher Education Price Index†	+ 4.4	+ 5.5	+ 6.6	+ 7.4

* Total-return rates represent change in market value, plus dividends and interest, for periods ending June 30, 1986, based on preliminary data for 153 investment pools of 134 colleges and universities.

† An index of changes in prices paid by colleges and universities for goods and services, developed by D. Kent Halstead, National Institute for Education.

SOURCE: NATIONAL ASSOCIATION OF COLLEGE AND UNIVERSITY BUSINESS OFFICERS

Duke U. Promised $20-Million Gift

DURHAM, N. C.

Duke University has received a pledge of $20-million, the largest single donation to the institution since James B. Duke's original gift to establish it in 1924. The money will be used to create a research institute on the future of humanity and to support 20 new professorships.

The gift was made by Disque D. Deane, chairman and chief executive officer of Corporate Property Investors and a partner in Lazard Freres and Company, an international investment business.

Mr. Deane is a trustee of Duke, and his son and daughter are both graduates of the university.

Duke officials said the gift would endow 20 professorships and provide for the establishment of an institute for studies focusing on man's capacity to adapt to the impact of social, cultural, and technological advances.

A Challenge Pledge

The gift is a challenge pledge. For every $1-million contributed to the university's current capital campaign for the new professorships, Mr. Deane will donate stock and other securities worth at least $1-million.

Duke's president, H. Keith H. Brodie, said Mr. Deane's pledge was the largest made thus far in the $200-million campaign for the arts and sciences.

The new professorships will be named for the Deane family, and all appointments to them will be made from outside the current ranks of the university's faculty.

"They will be sought at the world's leading universities and research institutions," said Mr. Brodie. The Deane Family Professors will be drawn from a wide range of fields in the sciences and the humanities, he added.

The professors will be affiliated with the new research center, which is to be called the Deane Institute.

How one president solved an enrollment problem

By The Response Marketing Group

The freshman class was smaller than expected. A lot didn't show up. Why? Everyone had a theory. But those with the theories wouldn't be held responsible. The President would. Everyone knows the demographics. But did it have to be inevitable?

"How do we boost enrollment? How do we tell our story? Electronic media would help, but at what price to cover six states?" he thought.

"Direct mail is the only way—it's the fastest growing segment of the marketing industry," he concluded. "Ours looks good—we do it ourselves—but how effective has it been? Apparently not good enough.

He began watching his mailbox, searching for a clue.

"Would the same direct marketing ideas that the Smithsonian Institution, Dow Jones, Democrats, Republicans use work for attracting students? And who does these?

That's how he found us, The Response Marketing Group of Moore's Response Graphics, a $2 billion a year corporation.

Student recruitment was new for us, but our direct response marketing ideas and methods are proven, so we went to work and so did the president.

1 First, we did our research. Who are the current students? Where did they come from? What are their psychographics? (Those with the theories told us the demographics). Meanwhile, he took personal interest in the figures, checking them on a weekly basis. He mobilized the human resources of the institution into task forces.

2 Second, we worked on the mailing list—pulling names together from several sources, merging the lists while eliminating the duplicate names. We coded the return cards and applications to find out which lists worked best. We also found out what features of the institution drew the best responses when highlighted.

3 Third, we designed a direct mail piece that was response oriented. It used direct response techniques, designed to get the recipient to take action now and not get lost in the glut of college mail. We tested the new piece against the existing recruitment mailing piece. Direct mail professionals do more testing than college faculty. Every assignment contains a test—copy, pictures, headlines, offers. We go with the winners and dispose of the losers—kind of like college when you think about it.

4 Fourth, we tracked all the responses and followed up with the best prospects who did not respond on the first try—all personalized and on a predetermined schedule. Nothing was left for chance.

Finally, we evaluated our results using a geodemographic analysis of the students who enrolled, comparing them to the population at large as well as the current student body. This year we modified our plan to better target those most likely to "buy our product".

Sounds simple and it worked. Oh yes, there was a dramatic increase in enrollment. We're not taking all the credit. We turned up more likely students, but our president mobilized his forces internally to handle important college nights, campus visits, application processing, not to mention inspiring the faculty to produce the best product possible in order to get our prospects to enroll. But for his mailing, he did as business has learned to do: hired a professional who knows how to increase results.

By the way, those with the theories, say it couldn't have happened without them. They are possibly right. But to those who matter, they know it was the President's leadership that made the difference. He figured out what to do.

To find out how you might integrate a professional direct response marketing program into your admissions effort, contact The Response Marketing Group, 7 N. Brentwood, Clayton, Missouri 63105 or call 314-721-4520.

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THE CHRONICLE
of Higher Education®

ISSN 0009-5982

January 14, 1987 • $1.95
Volume XXXIII, Number 18

News Summary

Articles on inside pages

Students being accepted at law schools are less qualified than those accepted even a few years ago. Story on Page 37.

This year's freshmen are relying significantly less on federal grants than first-year students did in 1980. Story on Page 37.

Publishers of glossy, general-interest magazines are going after the college-student market. Story on Page 37.

Pre-college students in the United States are "underachievers" in mathematics, according to a new study. Story on Page 2.

The search to determine the structure of the universe, which some scientists say resembles a sponge, could provide clues to its origin. Story on Page 4.

Costs of health care tripled for many colleges and universities between 1977 and 1985, a new survey has found. Story on Page 13.

Twelve state universities have formed an alliance to promote the quality of undergraduate instruction. Story on Page 13.

A list of major issues affecting higher education that the 100th Congress is likely to consider begins on Page 25.

Japan is the focus of attention among American academic leaders looking to develop educational programs there. Story on Page 43.

A panel investigating unrest at South Africa's University of the Witwatersrand has condemned police intervention and criticized student violence. Story on Page 43.

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NCAA Presidents Call New Meeting on Sports Reform

Recruiting, coaches' pay, and scholarships on agenda

By **CHARLES S. FARRELL**
and **DOUGLAS LEDERMAN**

SAN DIEGO

The National Collegiate Athletic Association's presidents' commission last week called a special convention of the association for this summer.

The convention will consider rules changes aimed at containing the spiraling costs of intercollegiate athletics and bringing college sports back into balance with educational priorities, commission members said.

The special convention, to be held in June in Dallas, is the second such meeting called by the commission since its creation three years ago. Although the 44-member panel's role is largely advisory, it does have the power to call special conventions.

John B. Slaughter, chancellor of the University of Maryland at College Park and chairman of the commission, said the June meeting would address such issues as recruiting, coaches' compensation, the length of playing and practice seasons, the size of coaching staffs, and financial aid for athletes.

Coaches Say They're Ignored

Many delegates at the regular N.C.A.A. convention here last week viewed the call for the special convention as one more step by presidents to control the direction of college sports.

Several coaches and athletic directors said they feared that the presidents were ignoring them in the reform process.

"There is great concern that in moving to make things better, the presidents won't take the opportunity to consult with the

Continued on Page 42, Column 1

1987 LEGISLATIVE OUTLOOK

Congress May Boost Science Spending, Reject Reagan's Deep Student-Aid Cuts

By **STACY E. PALMER**

WASHINGTON

President Reagan wants to spend a lot more at the National Science Foundation and a lot less on student aid and other Education Department programs.

The new Congress may go along with him on science, but is unlikely to agree to the drastic cuts for education.

An interest in bolstering economic competitiveness is fueling the Congressional desire to spend more on education and research, but pressures to curb the federal deficit could temper lawmakers' generosity.

Colleges must still fight to protect their federal funds, Congressional sources said, and may have to be willing to accept the elimination of some programs to save others.

In the budget unveiled last week, Mr. Reagan proposed to reduce spending on student aid by 45 per cent—the deepest cut he has ever proposed. If the plan were adopted, about 900,000 of the 5.6 million students who qualify for loans and grants would no longer be eligible. But such a severe reduction is unlikely to get much support in Congress.

At the same time, Mr. Reagan sought

Continued on Page 19, Column 1

Details of President Reagan's new budget proposals begin on Page 17.

Some States' Colleges Seek Big Money, Others Just Hope to Avert Reductions

By **CAROLYN J. MOONEY**

Higher education will seek money for ambitious new initiatives from some state legislatures in 1987, while colleges in financially strapped states will simply try to hang on to what they have.

As new legislative sessions get under way this month, college systems in at least a dozen states—particularly those with depressed energy or agricultural economies—have already been forced to cut their budgets for the current fiscal year. For college officials in Alaska, Louisiana, Montana, and Nebraska, for example, financial survival is the top priority, and many long-term plans for major improvements will have to wait.

In some states with stronger economies, higher-education systems have long wish lists for the next fiscal year and are requesting major increases in state appropriations.

But while interviews with state higher-education officials showed that most legislative priorities do indeed carry price tags, money won't be the only issue debated in state capitols and committee chambers throughout the nation in the next few months.

Many governors and legislators will

Continued on Page 26, Column 1

Reports on higher-education issues in all 50 legislatures begin on Page 27.

Politics and Scholarship Mix in China Researcher's Long Battle with Stanford

By **ELLEN K. COUGHLIN**

Even before his problems began, Steven Mosher was more than just another graduate student.

When he went to China to conduct anthropological research in 1979, he was carrying the hopes of America's China-studies establishment with him. He was one of the first U.S. social scientists since the Communist takeover in 1949 to visit the Chinese countryside for long-term research. More than a few diplomatic strings had been pulled to get him there and to make sure that his stay would be productive.

He was extremely bright and ambitious, and he possessed an extraordinary facility for languages. What's more, he already knew some of the people who lived in the village he planned to study. With all that going for him, it was clear that Steven Mosher would be able to gather the kind of invaluable firsthand information about life in rural China that hungry Sinologists had been hankering after for years.

And, indeed, he did. But the getting of it got him nothing but trouble.

In February 1983, Stanford University dismissed Mr. Mosher from its graduate program in anthropology for "illegal and seriously unethical conduct" in the field, and it has since upheld that dismissal through three appeals. In response, Mr. Mosher is suing Stanford for alleged breach of contract, libel, slander, and violation of his right of free speech.

Now the Steven Mosher case is more than just another academic dispute. For many, it represents the insinuation of politics into international scholarship and scholarly exchanges, and mirrors the ethical dilemmas that researchers, especially anthropologists, face when they work in foreign countries.

Said one scholar who had a hand in negotiating the renewal of U.S.-China exchanges: "To have one of the earliest experiences sour as that one did is not trivial."

■

From September 1979 to June 1980, Mr. Mosher lived and conducted ethnographic research in a farming village in Guangdong province, near the city of Guangzhou (Canton). Relatives of his wife, a Hong Kong Chinese from whom he is now divorced, lived in the village; in fact, he had

Continued on Page 8, Column 1

Writing Grant Proposals Becomes More Exacting

As competition increases for philanthropic gifts, foundations are requiring more detailed information from applicants. See story on Page 33.

Ways & Means

When does a 22-per-cent increase for space-science research turn out to be no increase at all?

When the White House's Office of Management and Budget unknowingly uses figures that were simply "made up" to prepare the President's budget.

That statistical gaffe was discovered last week, soon after White House officials said Mr. Reagan was proposing a big increase for the National Aeronautics and Space Administration's basic-research activities.

William Graham, Mr. Reagan's science adviser, even highlighted the increase in a news conference as an example of the Administration's commitment to basic research.

NASA's puzzled budget officers, who had not calculated any increases, wondered what could have gone wrong.

What they found, said one budget official, was that numbers that were supposed to be used only as place holders on magnetic tape—until the Administration agreed on its final request—were never replaced with the actual figures.

"This year has been so rushed," she said, "that all of this got overlooked. It's wrong, it's just wrong. There's no increase from '87 to '88."

•

Fred Barnes of *The New Republic* has a suggestion for how President Reagan can shore up his image: Call in Education Secretary William J. Bennett, who Mr. Barnes says is one of only two people left in the Administration "with any ideas." (The other: Richard G. Darman, Deputy Secretary of the Treasury.)

Mr. Bennett, who has been known to respond "boring, boring, boring" to other officials' suggestions of how the President can boost his popularity, has just the thing to inspire the American people, Mr. Barnes wrote. Bolstering people's "cultural values," something Mr. Bennett has long been preaching, is what's needed to complete the "Reagan revolution."

What does the Secretary think of the suggestion? "To the extent it's complimentary to Bennett, he liked it," said Mr. Bennett's spokesman. But, the spokesman added, "He is not taking part in maneuverings from inside or outside to make any changes at the White House."

•

Riders: The President's proposal to abolish scholarship programs named after Patricia R. Harris, Jacob K. Javits, and Christa McAuliffe but preserve those honoring Senate Majority Leader Robert C. Byrd and Rhode Island Sen. Claiborne Pell prompted the *Wall Street Journal* to speculate that "being alive and in power makes a big difference in the world of education scholarships" . . . Capitol Publications, Inc., has announced the merger of two of its publications. News formerly contained in *Higher Education Daily* can now be found in an expanded *Education Daily*.

Government & Politics

Reagan Seeks Hike for Science Foundation, but Wants to Trim Health Institutes 10 Pct.

NIH, popular with Congress, seen unlikely to get big cuts, but some fear disruption of grants process

WASHINGTON

The National Science Foundation would be a big winner and the National Institutes of Health a loser if President Reagan's budget plan for science and research in fiscal 1988 were adopted.

The Administration, in effect, wants to trim the institutes' budget by about 10.5 per cent and to spread the cut over both this year, fiscal 1987, and next.

The science foundation would get an increase of nearly 17 per cent in 1988.

Lawmakers are not expected to accept the President's plan for trimming back the N.I.H., which continues to be one of their favorite agencies. However, the mere existence of the proposal could disrupt the grant-making process, some lobbyists said.

Here are some of the President's major proposals in science and health:

National Institutes of Health. The Administration has proposed a new financing scheme that would involve taking $334-million of the money Congress appropriated for the present fiscal year and transferring it to the N.I.H. budget for 1988.

For this year, that would mean the institutes would award about 700 fewer grants than they had planned and would give individual researchers less money than they would otherwise receive.

On average, the institutes would have to cut both new and continuing grants by about 7 to 8 per cent, an N.I.H. budget official said.

The actual percentage, however, would not be the same for all grants.

Both the House and the Senate would have to approve the proposed transfer of funds before it could take effect.

Administration budget analysts contend that the current level of Congressional appropriations for N.I.H. cannot be sustained in future years and that to insure stable financing, changes must be made in 1987.

This article was prepared by Colleen Cordes, Kim McDonald, and David L. Wheeler.

The proposal to shift money to next year's budget—essentially a 1987 budget cut by another name—was met with skepticism.

"They tried something similar two years ago and it failed," said Carol R. Scheman, director of federal relations for health and biomedical research at the Association of American Universities.

Although Administration budget officers said the money shift would be painless, college representatives said the proposal itself could be very disruptive, regardless of whether it is ever enacted.

N.I.H. officials will not be able to give out all of the agency's appropriation at the same rate they ordinarily would because of the possibility that Congress might approve the transfer. That delay in spending—which could last for months—would interrupt ongoing studies, lobbyists for biomedical research say.

And once the size of a grant has been negotiated downward, they fear the money would not be restored later to the researchers.

"They're really mucking around with the actual conduct of research," grumbled one lobbyist.

The Administration has also asked Congress to approve a huge advance next year that would be set aside to pay for the future costs of multiyear grants started in fiscal 1988. In theory, that would save researchers and college administrators from worrying whether Congress will appropriate enough money in later years to pay for the full terms of their grants.

Biomedical-research lobbyists were skeptical, however, that the amount the Reagan Administration asked for would be sufficient to pay the full costs of the grants.

AIDS research. The Department of Health and Human Services budget proposal calls for $534-million in education and research spending on acquired immune deficiency syndrome, a 28-per-cent increase over 1987.

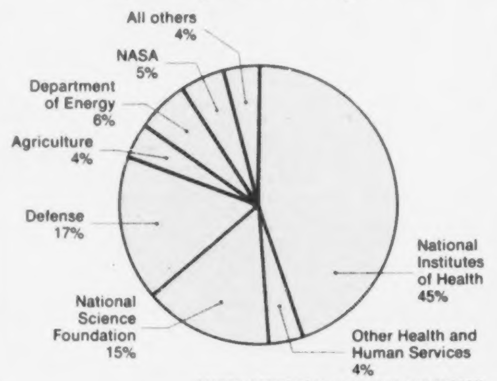
The money to combat AIDS would be split among the National Institutes of Health; the Centers for Disease Control; the Alcohol, Drug Abuse, and Mental Health Administration; and the Health Resources and Services Administration.

Medical education. The Administration proposes that $1.1-billion be saved through legislative changes in Medicare that would limit payments to hospitals for the direct and indirect costs of educating doctors, nurses, and allied health professionals.

The Administration budget assumes that Congress will repeal a

Continued on Page 20, Column 1

Sources of U.S. Funds for Research and Development on Campuses



SOURCE: OFFICE OF MANAGEMENT AND BUDGET

1988 Budget Plan Would Slash Student Aid to $4.5-Billion; Bennett Cites Desire to Focus Resources on Younger Students

By ROBIN WILSON

WASHINGTON

The Reagan Administration's education budget calls for $4.5-billion to be spent on student aid in fiscal 1988, compared to the $8.2-billion being spent this year.

It would also reduce programs that aid graduate students and eliminate funds for "developing" colleges that are not historically black.

Education Secretary William J. Bennett said the Administration intended to cut grants to all but the neediest students and require the remainder of those who need financial help to borrow more and pay higher interest rates than students are paying now.

The immediate Congressional reaction to the plan was negative.

The Education Department's budget plan would require students and their families to put more of their income toward paying college costs before they could receive Pell Grants, which go to the neediest students. And it would eliminate some student-aid programs altogether, such as College Work-Study, Supplemental Educational Opportunity Grants, and State Student Incentive Grants.

More of this year's freshmen have student loans and fewer have Pell Grants than in past years. Story on Page 37.

Mr. Bennett said last week the department's top priority was the education of younger children and insuring that people graduate from high school. He said the large reduction in student aid is necessary to allow the department to focus more of its resources on younger students.

The Secretary said the proposals to cut spending on Pell Grants by 31 per cent and require students to pay higher interest rates on loans would not stop students from attending college.

'You're Going to Pay for It'

"What we're doing is saying to people, 'There's as much access as there ever was, but you're the beneficiary. You're going to pay for it,' " Mr. Bennett said.

He again complained that the expansion of federal aid was making it too easy for colleges to hike their tuition rates. "While

Continued on Page 21, Column 1

Higher-Education Funds in President Reagan's Fiscal 1988 Budget

In the Department of Education

	Fiscal 1986 actual	Fiscal 1987		Fiscal 1988 requested
		Estimated spending	Reductions & transfers[1]	
Student assistance				
Pell Grants	$3,579,716,000	$3,900,000,000[2]	$ 0	$2,710,000,000
Supplemental Grants	394,762,000	412,500,000	412,500,000	0
College Work-Study	567,023,000	592,500,000	592,500,000	0
Income-contingent loans	—	5,000,000	0	600,000,000[3]
State Student Incentive Grants	72,732,000	76,000,000	76,000,000	0
Perkins Loans	208,626,000	210,000,000	188,000,000	26,000,000
Guaranteed Student Loans	3,265,941,000	3,004,000,000	287,000,000	1,176,574,000
Congressional Teacher Scholarships	9,570,000	15,500,000	15,500,000	0
Graduate support				
Patricia Roberts Harris graduate fellowships	11,245,000	11,750,000	11,750,000	0
Jacob K. Javits fellowships	2,393,000	3,400,000	3,400,000	0
Patricia Roberts Harris public-service fellowships	2,393,000	2,500,000	2,500,000	0
Institutional assistance				
Cooperative education	13,781,000	14,400,000	14,400,000	0
Developing institutions				
Aid for historically black colleges	—	50,741,000	0	40,741,000
Challenge grants	4,462,000	215,000	0	0
Endowment grants	22,210,000	19,785,000	0	10,000,000
Institutional support	108,464,000	75,467,000	0	0
Facilities				
Construction grants	9,570,000	0	9,570,000	0
Loans and insurance	17,991,000	19,205,000	0	0
Interest subsidies	22,490,000	23,000,000	0	22,500,000
International education	30,671,000	32,050,000	32,050,000	0
Law School Clinical Experience	1,435,000	1,500,000	1,500,000	0
Veterans' Education Outreach	2,871,000	3,000,000	3,000,000	0
Education for the handicapped				
National Institute on Disability and Rehabilitation Research	42,108,000	48,500,000	0	48,500,000
Research and development	16,269,000	18,000,000	0	18,000,000
Personnel development	61,248,000	67,730,000	6,482,000	50,000,000
Rehabilitation training	25,838,000	29,550,000	3,712,000	25,838,000
Postsecondary programs	5,264,000	5,900,000	0	5,900,000

	Fiscal 1986 actual	Fiscal 1987		Fiscal 1988 requested
		Estimated spending	Reductions & transfers[1]	
Aid to disadvantaged				
College-aid migrant programs	$1,148,000	$1,200,000	$1,200,000	$ 0
Legal Training for the Disadvantaged	1,435,000	1,500,000	1,500,000	0
Minority Institutions Science Improvement	4,785,000	5,000,000	0	5,000,000
Programs for disadvantaged students	168,786,000	176,370,000	94,000,000	82,370,000
Education research and statistics				
Office of Educational Research and Statistics				
Office of Research	20,500,000	20,100,000	0	21,500,000
Center for Statistics	12,300,000	14,100,000	0	21,600,000
Programs for the Improvement of Practice	18,100,000	22,100,000	0	19,600,000
Information Services	6,500,000	7,200,000	0	7,500,000
Bilingual education				
Bilingual vocational training	3,527,000	3,686,000	3,686,000	0
Training grants	32,123,000	33,564,000	0	33,564,000
Library resources				
Research libraries	5,742,000	6,000,000	6,000,000	0
Training and demonstration	957,000	1,000,000	1,000,000	0
Miscellaneous				
Adult education	97,579,000	105,981,000	0	130,000,000
Fund for the Improvement of Postsecondary Education	12,163,000	12,163,000	4,663,000	7,500,000
Office for Civil Rights	42,704,000	43,000,000	0	42,975,000
Teacher training	52,147,000	91,177,000	11,177,000	80,000,000
Vocational education	813,113,000	881,967,000	432,319,000	0
Women's educational equity	5,741,000	3,500,000	3,500,000	0

In Other Federal Agencies

Scientific research				
National Institutes of Health				
Cancer Institute	$ 1,228,751,000	$1,403,236,000	$ 64,112,000	$ 1,366,935,000
Heart, Lung, and Blood Institute	827,069,000	930,263,000	56,603,000	878,490,000
Institute of Dental Research	99,918,000	118,036,000	5,554,000	113,602,000
Institute of Diabetes, Digestive and Kidney Diseases	436,360,000	509,247,000	35,387,000	475,891,000
Institute of Arthritis, Musculoskeletal, and Skin Diseases	111,411,000	140,896,000	9,080,000	132,089,000
Institute of Neurological and Communicative Disorders and Stroke	414,739,000	490,494,000	35,011,000	458,204,000
Institute of Allergy and Infectious Diseases	404,820,000	545,766,000	26,492,000	577,594,000
Institute of General Medical Sciences	493,878,000	571,179,000	44,856,000	526,860,000
Institute of Child Health and Human Development	309,843,000	366,955,000	23,404,000	345,436,000
Eye Institute	186,511,000	216,774,000	15,191,000	200,020,000
Institute of Environmental Health Sciences	188,969,000	209,409,000	6,259,000	204,690,000
Institute on Aging	151,025,000	177,017,000	10,990,000	167,164,000
Research Resources	296,946,000	322,871,000	0	263,324,000
International Center	10,873,000	11,426,000	0	11,566,000
Center for Nursing Research	16,209,000	19,018,000	1,465,000	17,598,000
Library of Medicine	55,280,000	61,910,000	0	64,399,000
Total N.I.H.	5,300,418,000	6,183,948,000	334,404,000	5,868,681,000
National Science Foundation				
Research and related activities				
Mathematical, physical sciences	435,310,000	464,000,000	0	514,000,000
Geosciences	266,865,000	285,000,000	0	330,000,000
Biological and social sciences	239,292,000	257,000,000	0	297,000,000
Engineering	144,907,000	163,000,000	0	205,000,000
Computer and information science	100,879,000	117,000,000	0	143,000,000
Technological and international affairs	38,223,000	44,000,000	0	51,000,000
Program management	71,836,000	77,000,000	0	95,000,000
Total research	1,297,313,000	1,406,000,000	0	1,635,000,000
Science and engineering education	84,595,000	99,000,000	0	115,000,000
Antarctic program	110,160,000	117,000,000	0	143,000,000
Total National Science Foundation	1,493,167,000	1,623,000,000	0	1,893,000,000
Department of Agriculture				
Cooperative research				
Hatch Act support	148,800,000	148,800,000	0	155,500,000
Payments to black colleges	22,300,000	22,300,000	0	23,300,000
Minority research facilities	9,500,000	9,500,000	0	0
Special research grants	29,000,000	49,000,000	0	0
Competitive research grants	42,300,000	40,700,000	0	44,500,000
Animal-health research	5,500,000	5,500,000	0	0
Total cooperative research	285,400,000	307,900,000	0	240,200,000
Extension service	328,000,000	332,200,000	0	262,600,000
Department of Defense				
Basic research	953,700,000	891,700,000	0	918,000,000
Department of Energy				
General science	649,515,000	708,400,000	0	814,498,000
Environmental Protection Agency				
Research and development	213,793,000	191,500,000	0	190,000,000
Department of Interior				
Research and Development	377,000,000	361,500,000	0	374,200,000
National Aeronautics and Space Administration				
Space science research	1,476,500,000	1,526,600,000	0	1,508,300,000

Health research and training				
Alcohol, Drug Abuse, and Mental Health Administration				
Mental-health research	$322,000,000	$381,000,000	$5,000,000	$361,000,000
Centers for Disease Control				
Occupational safety and health research	65,000,000	68,000,000	0	66,000,000
Health professions				
Health-professions education				
Exceptional-need scholarships	6,690,000	7,000,000	7,000,000	0
Aid to disadvantaged students	24,400,000	27,250,000	20,000,000	0
Nurse training	61,520,000	53,300,000	47,122,000	0
Primary-care and family-medicine training	63,500,000	66,200,000	28,800,000	26,300,00
Total, Health-professions education	198,000,000	203,700,000	135,000,000	38,500,000
National Health Service Corps	56,000,000	60,000,000	15,500,000	43,000,000
National Health Service Corps scholarships	2,000,000	2,000,000	2,000,000	0
Medical-facilities guarantees and loans	25,000,000	20,000,000	0	22,000,000
Area health-education centers	17,200,000	18,000,000	8,800,000	0
Arts and humanities				
National Endowment for the Humanities				
Education programs	15,696,000	16,350,000	0	14,329,000
Fellowship programs	14,343,000	15,460,000	0	14,551,000
Research programs	15,696,000	16,400,000	0	14,897,000
General programs	22,190,000	22,580,000	0	19,247,000
State programs	20,179,000	21,000,000	0	17,871,000
Challenge grants	16,171,000	16,500,000	0	15,937,000
Treasury matching grants	11,092,000	12,000,000	0	11,114,000
Total National Endowment for the Humanities	132,679,000	138,490,000	0	126,890,000
National Endowment for the Arts	158,537,000	165,081,000	0	145,200,000
Institute of Museum Services	20,474,000	21,250,000	0	19,250,000
National Archives and Records Administration	97,004,000	100,321,000	0	110,266,000
Civil rights				
Commission on Civil Rights	11,771,000	7,500,000	0	9,800,000
Equal Employment Opportunity Commission	157,905,000	165,000,000	0	193,457,000
Miscellaneous				
Corporation for Public Broadcasting	159, 500,000	200,000,000	68,000,000	214,000,000[4]
GI Bill education and training	795,670,000	693,056,000	0	627,829,000
Peace Corps	124,410,000	130,760,000	0	130,682,000
U.S. Information Agency educational and cultural exchanges	134,458,000	145,000,000	0	152,500,000
Postal subsidies for non-profit organizations	715,836,000	650,000,000	0	0
Small Business Development Centers	30,000,000	35,000,000	4,100,000	31,100,000

[1] Proposed by the Administration but must be approved by Congress. All figures in this column are reductions, except for the National Institutes of Health and the Small Business Development Centers. For those agencies the amounts would be transferred from fiscal 1987 to 1988 and are also included in the 1988 figures.

[2] The Administration also proposes to transfer $287-million from the Guaranteed Student Loan program, which has a surplus, to finance more Pell Grants.

[3] The Administration also proposes to finance such loans through money collected under the Perkins Loan program.

[4] Figures proposed in 1988 provide 1990 funds because money is allotted two years in advance. The Administration is also proposing to withhold $132-million of the funds that have already been appropriated for fiscal 1988 and 1989.

President Seeks a Big Increase in Science Foundation Budget

Continued from Page 17

1986 freeze on any further regulatory tightening of Medicare payments for medical education.

"Congress has seen all these proposals before and rejected them, but we have to take them seriously because every year the budget gets tighter and tighter," said James D. Bentley, an associate director of the Association of American Medical Colleges.

The Administration is also going after other medical education and research efforts that have already been approved for fiscal 1987 spending by Congress. President Reagan wants to take back $135-million intended for health-professions education, leaving behind money that is mostly intended to promote training in family medicine and geriatric health care.

Science education. Science and engineering education at the National Science Foundation, as well as the agency's programs to encourage people to pursue careers in science and engineering, would get a hefty boost.

The President has proposed a 50-per-cent increase for those areas in response to the highly publicized "pipeline problem"—the fact that so few American students are choosing careers in science and engineering.

The extra money would support educational programs at the pre-college and graduate level, including 200 new graduate fellowships; special awards for young researchers; and efforts to increase the participation of women, minorities, and geographic regions that now receive a disproportionately small share of N.S.F. support.

The other major area that would benefit from the increase for science education would be undergraduate programs. More money would be available for scientific instruments for undergraduate classes, research opportunities for students, faculty enhancement, and improvements in curricula for calculus and engineering.

Defense research. The Department of Defense would get a small increase for basic research—about 3 per cent, to about $918-million.

Even that small increase, however, may prove vulnerable, science lobbyists warn. Congress, looking as usual for ways to reduce the Defense Department's request, may interpret the President's lower priority for military research as a sign that it can be cut even more. Or lawmakers may make an overall reduction and leave it up to the Pentagon to decide how to distribute the cuts. In such situations, the department tends to take a disproportionate share of the money from basic research.

However, the University Research Initiative, a two-year-old program that supports academic research and scientific training in areas the department determines are critical to its mission, would get $92.8-million, more than 2½ times its fiscal 1987 budget.

Those figures do not, however, include money for the Strategic Defense Initiative, the research program on missile defenses popularly known as "Star Wars." The Innovative Science and Technology Office, which distributes about two-thirds of its money to universities for novel approaches related to Star Wars, would get an increase of about 61 per cent in fiscal 1988. Over all, the President wants to boost Star Wars support by about 66 per cent, which would bring it to about $5.9-billion.

Energy. Tied to the Administration's interest in promoting economic competitiveness is an Energy Department proposal to increase its general-science funds by 13 per cent. The department's environmental research programs would also fare well, increasing by 12 per cent to pay for a stepped-up effort to identify and mitigate the health effects of radon gas and to begin a major effort of mapping the human genome.

Nuclear energy, meanwhile, would get 2 per cent more than the current year's level, while magnetic-fusion energy, which has been cut dramatically by Congress in recent years, would remain level. The principal new activity in fusion would be a Compact Ignition Tokamak device at Princeton University that is designed to prove that plasma, the hot fuel of fusion, can be ignited and burn without external heating.

As in previous years, Mr. Reagan has proposed cuts of as much as 50 per cent for research on fossil energy, conservation, solar, and other renewable sources of energy. He has also proposed taking back $256-million in fiscal 1987 funds for those areas. Congress, as in past years, however, is unlikely to approve such deep cuts.

Under Secretary of Energy Joseph F. Salgado told reporters that the Administration would decide later this month whether to ask Congress for $60-million in fiscal 1988 to begin construction of a massive particle accelerator known as the Superconducting Super Collider. The collider, which has already sparked intense competition among more than a dozen major research universities hoping to bring it to their states, is expected to cost at least $3-billion.

Space. For the National Aeronautics and Space Administration, spending for basic research would remain level. White House officials told reporters last week they were proposing a 20-per-cent increase for the agency's basic research budget, but NASA officials said that in the rush to prepare the budget, the Office of Management and Budget used the wrong numbers.

About $25-million of the approximately $1.5-billion for basic research would go to start an international effort to study the earth's magnetosphere and solar-terrestrial relationships for which the government plans to provide a total of $400-million over the next five years.

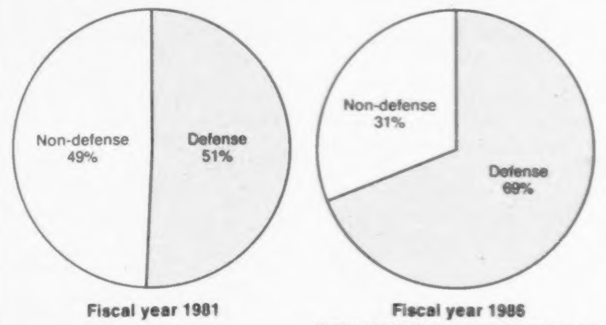
Funds for planetary exploration would decrease by 14 per cent, but NASA officials say the decline is due to costly spacecraft that are nearing completion and delays in launching those spacecraft because of the space shuttle *Challenger* disaster last year.

Agriculture. The Administration has proposed eliminating both special research grants—$49-million worth of the grants were made last year to investigate topics of regional concern—and an animal health and disease program that supports research at colleges of veterinary medicine. State governments should support regional research, the Administration argued.

The Administration also proposed small increases for research grants in such areas as plant science and human nutrition.

Administration budget officers say that agricultural research programs that would be cut in the Cooperative State Research Service can be folded into a competitive-grants program, but when the cuts and the increases are added up, the overall Cooperative State Research Service budget would drop 22 per cent. The Extension Service would also be sliced by 21 per cent.

How Defense's Share of Research and Development Has Grown



SOURCE: OFFICE OF MANAGEMENT AND BUDGET

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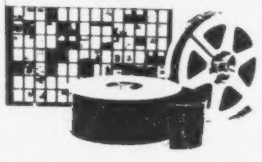

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Student-Aid Cuts Needed to Focus Resources on Younger Students, Bennett Says

Continued from Page 17

the increased availability of federal student aid and the way in which it is indexed to college costs may not be directly responsible for college tuition hikes, there is little doubt that federal aid facilitates and abets the increases," he said.

Although Education Department officials promoted with great fanfare their proposal to expand the availability of "income-contingent loans," which link repayments to borrowers' income after college, members of Congress and college representatives didn't have much enthusiasm for the plan.

Congress approved $5-million to test the new loan program this year, but the money has not yet been distributed. Lawmakers say they therefore don't know whether the plan will work and are unwilling to pour more money into it now.

Instead of calling it the I.C.L. program, Richard F. Rosser, president of the National Association of Independent Colleges and Universities, said it should be called the SLIP—student loan indenture program. Many students already graduate with huge debts, he said, and allowing them to borrow under the new program, which has high interest rates, would simply compound the repayment problems borrowers currently face.

Said Joseph T. Sutton, executive director of the Alabama Commission on Higher Education: "Some people think the states can act as a shock absorber if these aid cuts are enacted, and somehow replace the funds. But we don't have the dollars, and without a federal commitment, the needy students will just not get the aid."

Following are the key provisions of the Education Department's budget request:

Pell Grants. About one million fewer students would receive Pell Grants, as spending on them would be cut by $1.2-billion, to $2.7-billion. Grants would, in effect, be limited to students whose families earned $20,000 or less. The income limit is now about $28,900.

To insure that students' Pell Grants would not be reduced this year due to a shortfall in appropriations, the Education Department proposed transferring to the Pell Grant fund $287-million that was slated to be spent on Guaranteed Student Loans. The guaranteed-loan program did not cost the government as much as had been expected because interest rates were down.

Guaranteed Student Loans. Money to subsidize loans would be cut by 61 per cent, from $3-billion in fiscal 1987 to $1.2-billion in fiscal 1988. Most of the reduction would be made by requiring students to pay more interest and by lowering subsidies to banks and state loan-guarantee agencies.

Students would have to pay the interest that accrues while they are in college. Now, the government pays that interest. Borrowers also would have to pay a higher interest rate beginning in the third year of repayment. Now government subsidies keep the rate at 8 per cent for borrowers throughout repayment.

Direct and Income-Contingent Loans. The Administration wants to kill Perkins Loans (formerly known as National Direct Student Loans) and instead expand from $5-million to $600-million a program that ties borrowers' loan repayments to their income after graduation from college.

Under the expanded income-contingent loan plan, 500,000 students at 1,500 colleges would receive loans. About 896,000 students will receive $829-million in direct loans during the current academic year.

Borrowers' repayments on income-contingent loans would be set annually by their colleges and would never exceed 15 per cent of their income. Colleges could keep up to $75,000 of the money they received for administrative expenses.

Students could borrow up to $50,000 for their entire postsecondary education, compared to the $18,000 they may borrow now in direct loans. The interest would be at the market rate, which would be about 8.5 per cent now. Students currently pay 5 per cent on direct loans.

Campus-based aid. Money for the College Work-Study, Supplemental Educational Opportunity Grant, and State Student Incentive Grant programs would be eliminated. About $1-billion will be spent on approximately 1.8 million awards under those programs in fiscal 1987.

The Administration said work-study is "in effect, aid to postsecondary institutions rather than to students" because the government helps pay the wages of students who work for colleges and universities.

Graduate students. About $15.2-million is now provided from fellowship programs to graduate students who study certain subjects, including the arts, humanities, and social sciences. The Administration wants to abolish all spending on those programs as well as on other programs that provide legal training for disadvantaged students and clinical law experience for students. The government is spending $3-million on the law programs in fiscal 1987.

Said Bruce M. Carnes, Deputy Under Secretary of Education: "It's difficult to construe people working on Ph.D.'s or master's degrees as having an equal claim on the taxpayer's resources as disadvantaged elementary-school kids."

Developing institutions. Under the Administration's budget plan, no money would be provided to help financially struggling colleges strengthen their academic and other programs unless the institutions were classified as historically black.

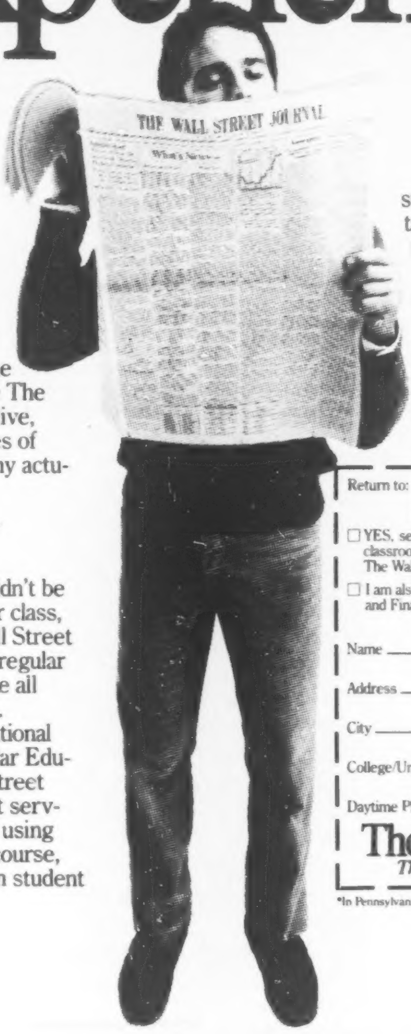
Congress appropriated $75.5-million this year to help developing institutions that are not historically black.

The Administration says its plan would return the program to one of its "primary missions," the support of historically black colleges.

Officials at colleges that have received money and are not historically black argue that they are just as needy as black institutions and often enroll large numbers of students from minority groups. They contend that the Administration wants to maintain funds to historically black institutions mainly as a way to show that it is concerned about minorities.

Under President Reagan's budget recommendation, about $51-million would be provided in fiscal 1988 to give financial assistance to historically black colleges and universities.

Maybe there is a substitute for experience.



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Note Book

Amy Carter, who has maintained a high profile as an anti-apartheid activist at Brown University, has drawn the wrath of at least one conservative columnist.

The acid-tongued Jeffrey Hart last week voted former President Jimmy Carter's daughter the Most Unacceptable Person of 1986, in part for her participation in an attempt in November to block Central Intelligence Agency recruiters at the University of Massachusetts at Amherst.

Ms. Carter and Abbie Hoffman, the veteran activist, were among those arrested during the protest.

Mr. Hart, who is also a professor of English at Dartmouth College, said that "Mzzzz. Carter" easily beat out perennial conservative bugbear Thomas P. "Tip" O'Neill, Jr., and Archbishop Raymond G. Hunthausen of Seattle for the award.

"Brown University, meet your True Daughter," wrote Mr. Hart with evident disgust in his syndicated column. "She has managed to transform herself into a total cultural cliché."

He concluded, "She has shown everyone how easy it is to be a jerk, and she wins a pair of Dan Ortega sunglasses and an Abbie Hoffman T-shirt."

■

Perhaps emboldened by her award, Ms. Carter last week said she and Mr. Hoffman planned to turn their forthcoming trials into a seminar on the activities of the C.I.A.

At a press conference after pre-trial hearings, Mr. Hoffman and Ms. Carter said they intended to call foreign ministers and former intelligence agents to testify at the trials, which are set to begin in April.

"We're putting the C.I.A. on trial," said Leonard Weinglass, Ms. Carter's lawyer and a longtime defender of leftist activists.

■

College life is but a game. That's the guiding principle behind the new Dartmouth Graduate Game, created and marketed by Matt McIlwain, a senior. Contestants race to fulfill core requirements and garner enough credits to graduate.

But they must run a gantlet of diversions, including movie houses, restaurants, and missed exams, which stand in the way of the coveted Dartmouth sheepskin.

For instance, players can receive cards that read, "Spent Winter Carnival in Baker Library, earn two major credits," or "Slept through final exam, lose one major credit."

Mr. McIlwain produced 2,000 of the games at a cost of $16,000. So far, he says he has sold more than 900 of them. In return for use of the college's name and crest, he agreed to give Dartmouth 90 cents for each of the $14.95 games sold.

Though Mr. McIlwain says life at Dartmouth is mirrored closely by his game, he is glad of at least one difference. "In real life, you can't lose credits," he says. "That would be tragic."

Students

At Many Law Schools, Drop in the Quality and Number of Applicants Is Taking a Toll

All but the most prestigious are said to be forced to accept students they once would have rejected

By ELIZABETH GREENE

LOS ANGELES

Declining academic credentials of law-school applicants, coupled with a significant drop in the number of applications, are forcing all but the most prestigious law schools to accept students they would have rejected even two or three years ago, say officials and faculty members.

"What we have is a group that most schools would not really like to admit," said David H. Vernon, a law professor at the University of Iowa, at the annual meeting of the Association of American Law Schools here last week. "The top's a little thinner; the bottom's a little thicker."

In addition, speakers at the meeting said, more and more places in law schools are being filled by students who can afford to pay the spiraling tuition costs and by students who qualify for grants and loans, with the middle class being squeezed out.

The schools will soon be filled "almost exclusively by the white sons and daughters of the rich and upper-middle-class, and a handful of black and brown students from relatively impoverished backgrounds fortunate enough to receive substantial grants enabling them to attend," said John R. Kramer, dean of the law school at Tulane University.

16-Pct. Drop Since 1982

The number of law-school applicants has dropped more than 16 per cent since 1982, the peak year, according to figures collected by the Law School Admission Council/Law School Admission Services and analyzed by Bruce I. Zimmer, executive vice-president of the council, and Mr. Vernon. The council administers the Law School Admission Test.

In 1986, the number of law applications did increase 1.1 per cent, but officials said the rise was too small to be meaningful. The number of students applying from the most selective undergraduate colleges is falling faster than the number of applicants from other colleges, Mr. Zimmer and Mr. Vernon reported.

Academic Strength Falling

The academic strength of the applicants is falling at a faster rate than the size of the general applicant pool, according to their data, which will be published this spring in the *Duke Law Journal*.

Between 1983 and 1986, the number of applicants fell almost 15 per cent—from 71,755 to 61,133.

The number of applicants with L.S.A.T. scores of 34 or above (on a scale of 10 to 48) and with grade-point averages of 3.25 or better fell almost 24 per cent in that period; the number with scores of 30 or better and grade-point averages of 3.0 or better fell by more than 22 per cent.

But Mr. Zimmer said today's law-school applicants are still stronger than at any time before 1973.

Through a complex statistical analysis, his and Mr. Vernon's research shows that most law schools enrolled people in 1985 with somewhat lower academic credentials than in 1983. "That's sort of the posi-

Continued on Following Page

More of this Year's Freshmen Borrow for College; Fewer Get Pell Grants

LOS ANGELES

The percentage of this year's freshmen who have federal grants was the lowest in at least nine years, according to a new study.

Meanwhile, the percentage of students who have government loans reached a five-year high, the study said.

About one in six students said they had federal Pell Grants, compared to nearly one in three in 1980 and about one in five in 1978. More than one in four, however, has a Guaranteed Student Loan this year, up from about one in five in 1980 and only one in ten in 1978.

"These data point to dramatic shifts in the way American college students and their families have had to cope with changing federal-aid policies over the last six years," said the study's director, Alexander W. Astin, a professor of education at the University of California at Los Angeles.

The survey agrees with a new Congressional study that reported a tripling of student borrowing in the last decade (*The Chronicle*, January 7).

That report said borrowing under federal programs rose from $3.5-billion in 1975-76 to $9.8-billion in 1985-86—adjusted to 1986 dollars. Federal spending on grants over the same period fell from $13-billion to $5-billion, also in 1986 dollars, the study said.

Mr. Astin said a decrease in money for students in the Pell Grant program might account for a drop in the number of students from poor families in the new freshman class. Only one in five reported a family income under $20,000, compared with two in five in 1980. The percentage of students reporting family incomes below

Continued on Following Page

Magazines for Students Proliferate as Advertisers Aim for the Campus Market

By MICHAEL W. HIRSCHORN

Moving Up, a magazine to help college men establish a "successful lifestyle," wants to tell students how get into shape with weight training: "Start now and watch how you change!"

Campus Voice offers a "tribute to the people, places, traditions, and achievements shaping college campuses," and reports on "strange and intriguing occurrences on campuses across the nation."

College Woman, in its current issue, featuring television reporter Judy Woodruff looking successful on the cover, proffers career tips for "the woman on the way up."

Careers, Money, and Sex

If you're a college student today, it's nigh on impossible to hide from an avalanche of glossy magazines hoping to give the upwardly mobile person advice on careers, money, sex, entertainment, and "life style options."

About a dozen general-interest national and regional magazines are currently being published specifically for the college market. That includes three magazines that will begin publishing this month or in February. Five years ago, according to one advertising directory, there were only two, *Ampersand* and *Nutshell*.

The reason: Publishers and marketers have discovered that college students mean big bucks.

"The college audience is a very attractive audience to advertisers," says Jim Omastiak, vice-president and publisher of *Campus Voice*. "There's a great opportunity to capture and win them over. It's a combination of their being in a vulnerable transition period and who they are as consumers."

Marketers and publishers say college students generally have excess cash and

Continued on Following Page

TEXAS
COLLEGE STUDENT
Campus Voice
Moving Up
80s CAREERS
On Campus
Religious Revival!

Some of roughly a dozen magazines now aimed at college students.

More Freshmen Have Loans; Fewer Get Pell Grants

Continued from Preceding Page

$30,000 has dropped by almost one half over the past six years.

"If you look at the rapid decline in the enrollment of low-income students, it's hard to rationalize that strictly in terms of inflation," said Mr. Astin, adding that poor students are unwilling to burden themselves with heavy debt to attend college. "They're asking themselves, 'Am I going to owe a lot of money when I get through?' " he said.

The findings are from *The American Freshman: National Norms for Fall 1986*, a survey of 204,491 freshmen at 372 institutions conducted by the Cooperative Institutional Research Program of the University of California at Los Angeles and the American Council on Education. The freshman survey has been conducted annually since 1965.

> **"The notion of a monolithic trend toward conservatism is clearly refuted by our figures."**

The survey results painted an often conflicting picture of the current crop of first-year students. While interest in "helping others," "promoting racial understanding," and "participating in community action programs" fell to an all-time low, a record percentage of students expressed support for public-school integration through busing, legalized abortion, and a national health-care plan. Mr. Astin called the support for busing among 56.1 per cent of freshmen "an astounding finding."

"The notion of a monolithic trend toward conservatism is clearly refuted by our figures," Mr. Astin said.

Yes to Capital Punishment

However, only one in four students favored the abolition of capital punishment (down from 57.6 per cent in 1971), and only about one in five favored legalizing marijuana use (down from a peak of 52.9 per cent in 1977). And, for the first time ever, a majority of incoming freshmen, 52.2 per cent, favored laws prohibiting homosexual behavior, up from 47.9 per cent last year.

Mr. Astin said the anti-homosexual sentiment and the support for capital punishment were products of fear among students, and not evidence of a shift to the right.

The number of students who said they believed that "the activities of married women should be confined to the home and family" fell to an all-time low of 20.3 per cent, down from 56.7 per cent in 1967. However, men were almost twice as likely as women to support the proposition.

Materialistic Concerns Gain

The percentage of students who considered themselves "liberal" or "far left" inched up for the fourth year in a row.

Nearly one in four students said they were "liberal" or "far left," up from the low of 19.7 per cent in 1981. The percentage of students calling themselves "conservative" or "far right" slipped slightly, to 20 per cent, from an all-time high of 20.9 per cent last year.

The trend toward materialistic concerns continued, with nearly three in four students saying that "being very well-off financially" was "very important" or "essential," up from 39.1 per cent in 1970. Interest in business careers rose to an all-time high of 24.1 per cent of students, more than double the 1966 figure of 11.6 per cent.

Meanwhile, the percentage of students who believed "developing a meaningful philosophy of life" to be important fell to a record low of 40.6 per cent, down from 82.9 per cent in 1967.

Among the report's other findings:

► More than half the students said they spent no time using a personal computer and less than one in ten reported using a computer for more than five hours a week.

Only 3.5 per cent were interested in pursuing computer careers, down from 8.8 per cent in 1982.

Mr. Astin said his findings suggested that computer use was beginning to slip. He predicted that the decline would continue, barring a concerted effort by universities to promote computer use.

► Interest in education careers continued to rise, while interest in engineering careers continued to drop.

The percentage of students interested in pursuing engineering fell to 9.7 per cent this year from 12.0 per cent in 1982.

► Two-thirds of the students said they spent at least one hour a week engaged in religious activities, according to a section of the report added this year.

► The most mentioned reasons for attending college, were, in descending order: to get a better job, to learn more about things, to make more money, and to gain a general education.

► Less than 47 per cent of the students said they believed colleges should divest their South Africa-related investments.

The American Freshman is available for $12.95 from the Higher Education Research Institute, Graduate School of Education, University of California at Los Angeles, 405 Hilgard Avenue, Los Angeles 90024.

—MICHAEL W. HIRSCHORN

Hours Students Spent Each Week on Various Activities

	Studying or doing homework:	Talking with teacher outside of class:	Using a personal computer:	Religious services or meetings:
None	2.3%	19.3%	51.7%	33.3%
1-2	16.5%	54.2%	25.4%	47.9%
3-5	31.7%	18.6%	13.6%	13.5%
6-10	28.3%	5.1%	5.9%	3.7%
11-15	12.6%	1.6%	1.7%	0.8%
16-20	5.4%	0.6%	0.8%	0.3%
21-30	2.3%	0.3%	0.3%	0.2%
Over 30	0.9%	0.2%	0.5%	0.3%

	Exercising or sports:	Partying:	Working for pay:	Student clubs or groups:
None	7.5%	18.0%	27.6%	35.2%
1-2	17.4%	20.0%	3.9%	27.3%
3-5	21.2%	24.3%	6.4%	21.4%
6-10	20.0%	18.3%	10.0%	9.6%
11-15	15.6%	8.8%	12.7%	3.6%
16-20	9.4%	4.8%	18.4%	1.6%
21-30	4.4%	2.3%	13.6%	0.6%
Over 30	4.6%	3.4%	7.4%	0.7%

	Socializing with friends:	Watching television:	Volunteer work:	Hobbies:
None	0.5%	6.4%	55.6%	10.2%
1-2	4.4%	23.8%	26.8%	28.0%
3-5	13.6%	30.9%	11.0%	31.6%
6-10	23.6%	22.0%	3.9%	16.8%
11-15	20.7%	9.2%	1.3%	6.9%
16-20	16.5%	4.1%	0.6%	3.2%
21-30	9.5%	1.8%	0.3%	1.3%
Over 30	11.3%	2.0%	0.5%	2.0%

Magazines Aimed at Students Proliferate as Advertisers Seek to Reach the Lucrative Campus Market

Continued from Preceding Page

like to spend it. They have not yet developed what advertisers call "brand loyalty," and their product choices often influence those of consumers who are not in college.

As a result, college-oriented magazines are finding it easy to fill their pages with ads for automobiles, stereo equipment, alcohol, and athletic goods.

Big Increases in Ads

Campus Voice boasts a 15-per-cent rise in advertising pages in 1986 over 1985. *Newsweek on Campus*, a bimonthly similar in all but subject matter to the national newsweekly, reports a 14-per-cent increase over the same period and a doubling of advertising pages since 1984. *Dorm Magazine*, which is mailed free to about a million students nationwide, reports a 25-per-cent increase in advertising pages in 1986.

Many of the magazines, which are distributed free on campuses or as inserts in college newspapers on a quarterly or bimonthly basis, serve as vehicles for massive marketing campaigns.

For instance, Alan Weston Communications, Inc., which produces *Moving Up*, *College Woman*, and two other college-oriented magazines, *Ampersand* and *College Musician*, uses the publications as centerpieces for a multi-media marketing barrage.

"A company can come to us and do anything they want to in this marketplace," says Larry Smuckler, vice-president for publishing at Alan Weston.

Mr. Smuckler says his company has recruited representatives to help the American Telephone and Telegraph Company sell long-distance phone services on campus, has produced advertisement packages to be aired before campus movies, and will publish a magazine or a poster campaign for any company willing to pay for it.

Nonetheless, he avers, "We're clearly a publishing company."

Sending Out 'Good Stuff'

Campus Voice magazine was integrated three years ago into a huge marketing network that combined radio programs, a bi-weekly poster "magazine," and free mailings of merchandise samples in boxes labeled "Good Stuff."

Publishers say the boom followed the success of *Newsweek on Campus*, started in 1983 as a way to attract future subscribers to the parent publication, which was facing an unwanted increase in the average age of its readership.

"Advertisers were looking for upscale consumers and *Newsweek* was looking for new readers," says Scott L. Kauffman, publisher of *Newsweek on Campus*.

For all the talk of sophisticated marketing campaigns, however, the college magazine has remained the domain of the young entrepreneurs, former students like Doug Ranalli, who turned his magazine about dormitory life at Cornell University, *Dorm Magazine*, into a national publication after he graduated in 1983.

The granddaddy of the current crop of magazines, *Campus Voice*, was founded in 1969 as *Nutshell* by two University of Tennessee graduates, Christopher Whittle and Phillip Moffitt, who proceeded to use the magazine as a springboard for other publishing ventures. Mr. Moffitt recently sold *Esquire* magazine and Mr. Whittle still heads the company that produces *Campus Voice*.

A Magazine for Texas

The latest college publishing ventures also have their roots in student entrepreneurship. *Texas College Student*, which is expected to begin publication next month, will be born of the ambitions of Rodney Schlosser, a 1985 graduate of the University of Texas at Austin and a former student-body president there.

The student magazine, which Mr. Schlosser hopes will be the Texas college equivalent of *Texas Monthly* or *New York* magazine, will be inserted into the 30 largest student papers in the state. Mr. Schlosser hopes eventually to publish six regional student magazines around the country.

Michael Weiss was still a student a Stanford University when he thought of the idea of taking the chatty Andy Warhol magazine *Interview* and turning it into a publication, called *Panache*, that celebrated the college student.

Trouble Seen for Newcomers

"We'd try to find some girl who was the Rose Bowl queen and put her on the cover the same way we'd put Kathleen Turner on the cover of *People*," Mr. Weiss recalls. Mr. Weiss reproduced the concept at Syracuse University, where he attended law school. This month, he will begin publishing a national edition of *Panache*.

Despite the vistas of green that beckon the young would-be publishers, many predict trouble ahead for the newcomers.

Few of the small publications have the resources to compete for advertising dollars with established magazines like *Newsweek on Campus* or the four-year-old *BusinessWeek Careers* magazine, which is published by McGraw-Hill, Inc.

"We're getting overloaded with magazines," says Mr. Omastiak of *Campus Voice*. "I've seen more new launches now than ever before, and many of them are not going to make it."

Decline in Quality of Applicants Taking Toll at Law Schools

Continued from Preceding Page

tive side of the story for those who advise students," Mr. Zimmer said. "They have a shot at getting into a better school."

Officials said it was difficult to gauge why interest in law had diminished so much among those with the highest scores.

Mr. Zimmer speculated that the best students were possibly being lured away by jobs in such financial fields as investment banking, which are now paying top dollar for strong college graduates and compete with law schools for people.

The smaller applicant pool may be a symptom of the low interest in the humanities by many students, some of the participants at the meeting said. They also said the larger debts being run up by undergraduates, who are depending more and more on student loans, might be dissuading many from further education.

Adapting to Smaller Enrollments

The quality of American lawyers could decline, officials said, as a result of the falling academic credentials of today's applicants.

In addition, they said, unless the small percentage increase in applicants last year was indicative of a longer-term upward trend, the law schools wishing to maintain their current admissions standards may have to cut back on course offerings and faculty hiring to adapt to smaller enrollments.

Philip D. Shelton, dean of the law school at Washington University (Mo.), said it was the responsibility of the council, the American Bar Association, and the Association of American Lawyers to devise a set of "minimum standards of competence" for law students.

"We need to know who can functionally perform the duties of the lawyer," he said.

FACT-FILE

Views and Characteristics of this Year's Freshmen

A national profile based on responses of 204,000 students who entered college in the fall of 1986

Characteristics

Age by December 31, 1986:

16 or younger	0.1%
17	2.8%
18	72.1%
19	19.0%
20	1.9%
21-24	1.9%
25-29	0.9%
30-39	0.9%
40-54	0.3%
55 or older	0.0%

Racial/ethnic background:

White	85.8%
Black	8.5%
American Indian	0.9%
Asian-American	2.5%
Mexican-American	1.2%
Puerto Rican-American	0.9%
Other	2.0%

Average grade in high school:

A or A+	10.7%
A−	11.8%
B+	18.3%
B	24.8%
B−	14.1%
C+	12.5%
C	7.3%
D	0.4%

Academic rank in high school:

Top 20%	41.7%
Second 20%	22.3%
Middle 20%	28.8%
Fourth 20%	6.1%
Lowest 20%	1.1%

Year of high-school graduation:

1986	92.2%
1985	2.8%
1984	0.9%
1983 or earlier	2.4%
H. S. equivalency (G. E. D. test)	1.4%
Never completed high school	0.3%

Have met or exceeded recommended years of study, as proposed by the National Commission on Excellence in Education, in:

English (4 years)	93.6%
Mathematics (3 years)	88.1%
Foreign language (2 years)	71.1%
Physical science (2 years)	53.6%
Biological science (2 years)	35.5%
History, American government (1 year)	98.9%
Computer science (.5 years)	59.1%
Art or music (1 year)	63.0%

Marital status:

Not married	98.0%
Married, living with spouse	1.6%
Married, not living with spouse	0.4%

Disabilities:

Health-related	0.8%
Hearing	0.6%
Learning	0.8%
Orthopedic	0.7%
Speech	0.2%
Visual	1.7%
Other	0.9%

Current religious preference:

Jewish	3.2%
Protestant	29.5%
Roman Catholic	36.0%
None	10.0%
Other	21.2%

Residence planned during fall term:

With parents or relatives	29.8%
Other private home or apartment	8.0%
College dormitory	58.4%
Fraternity or sorority house	0.6%
Other campus housing	2.2%
Other	1.0%

Residence preferred during fall term:

With parents or relatives	16.4%
Other private home or apartment	29.2%
College dormitory	39.7%
Fraternity or sorority house	6.8%
Other campus housing	5.4%
Other	2.5%

Father's occupation:

Artist (incl. performer)	0.8%
Businessman	30.2%
Member of clergy or religious worker	1.0%
Engineer	8.4%
Farmer or forester	3.1%
Lawyer	1.7%
Military career officer	1.7%
Physician or dentist	2.3%
Other health professional	1.4%
Research scientist	0.6%
Teacher or administrator, college	1.0%
Teacher or administrator, elementary school	0.7%
Teacher or administrator, secondary school	3.6%
Worker, skilled	10.4%
Worker, semi-skilled	4.5%
Worker, unskilled	3.1%
Other occupation	23.0%
Unemployed	2.6%

Father's education:

Grammar school or less	4.1%
Some high school	8.7%
High-school diploma	27.4%
Postsecondary other than college	5.0%
Some college	14.1%
College degree	20.3%
Some graduate school	2.7%
Graduate degree	17.8%

Mother's occupation:

Artist (incl. performer)	1.6%
Businesswoman	13.4%
Member of clergy or religious worker	0.1%
Clerical worker	11.3%
Engineer	0.2%
Farmer or forester	0.3%
Homemaker (full-time)	20.6%
Lawyer	0.2%
Nurse	7.5%
Physician or dentist	0.3%
Other health professional	1.8%
Research scientist	0.1%
Social, welfare, or recreation worker	1.2%
Teacher or administrator, college	0.4%
Teacher or administrator, elementary school	5.9%
Teacher or administrator, secondary school	3.6%
Worker, skilled	2.1%
Worker, semi-skilled	3.0%
Worker, unskilled	2.1%
Other occupation	17.6%
Unemployed	6.7%

Mother's education:

Grammar school or less	3.0%
Some high school	6.8%
High-school diploma	36.3%
Postsecondary other than college	7.8%
Some college	16.4%
College degree	18.1%
Some graduate school	2.9%
Graduate degree	8.7%

Students estimate chances are very good that they will:

Change major field	13.1%
Change career choice	12.1%
Fail one or more courses	1.4%
Graduate with honors	11.3%
Be elected to student office	3.2%
Get a job to pay college expenses	36.7%
Work full-time while attending college	3.6%
Join a social fraternity or sorority	17.2%
Study abroad while enrolled	10.4%
Play varsity athletics	14.2%
Be elected to an honor society	6.6%
Make at least a B average	39.8%
Need extra time to complete degree	6.5%
Need tutoring in some courses	11.0%
Work at outside job	20.3%
Seek vocational counseling	5.4%
Seek personal counseling	3.5%
Get a bachelor's degree	67.6%
Participate in student protests	4.7%
Drop out temporarily	1.2%
Drop out permanently	0.8%
Transfer to another college	10.0%

Students estimate chances are very good that they will: (Continued)

Be satisfied with college	52.5%
Find employment in preferred field	69.6%
Marry while in college	4.4%
Marry within a year after college	15.3%

Number of other colleges applied to for admission this year:

None	35.3%
One	17.2%
Two	16.0%
Three	14.0%
Four	7.7%
Five	4.7%
Six or more	5.1%

Number of other college acceptances this year:

None	18.2%
One	28.7%
Two	23.4%
Three	15.8%
Four	7.5%
Five	3.3%
Six or more	3.0%

College attended is student's:

First choice	71.4%
Second choice	21.3%
Third choice	4.8%
Other	2.5%

Distance from home to college:

5 miles or less	8.2%
6-10 miles	9.3%
11-50 miles	27.7%
51-100 miles	16.6%
101-500 miles	28.0%
More than 500 miles	10.1%

Reasons noted as very important in deciding to go to college:

Parents' wishes	16.9%
Could not find job	3.9%
To get away from home	9.4%
To be able to get a better job	83.1%
To gain general education	61.6%
To improve reading and study skills	40.3%
Nothing better to do	2.5%
To become a more cultured person	32.2%
To be able to make more money	70.6%
To learn more about things	74.1%
To prepare for graduate school	47.1%

Reasons noted as very important in selecting college attended:

Relatives' wishes	7.7%
Teachers' advice	4.4%
Good academic reputation	59.2%
Good social reputation	27.2%
Offered financial assistance	21.5%
Offers special education programs	23.5%
Low tuition	22.4%
Advice of guidance counselor	8.4%
Wanted to live near home	18.8%
Friend's suggestion	8.4%
Recruited by college	3.7%
Recruited by athletic department	4.6%
Graduates go to top graduate schools	25.8%
Graduates get good jobs	46.8%
Not offered aid by first choice	4.7%

Highest degree planned at college attended:

None	3.3%
Vocational certificate	1.6%
Associate (or equivalent)	21.6%
Bachelor's	56.5%
Master's	12.0%
Ph.D. or Ed.D.	1.6%
M.D., D.O., D.D.S., or D.V.M.	1.2%
LL.B. or J.D.	0.6%
B.D. or M.Div.	0.2%
Other	1.2%

Highest degree planned anywhere:

None	2.0%
Vocational certificate	1.2%
Associate (or equivalent)	6.3%
Bachelor's	36.8%
Master's	33.0%
Ph.D. or Ed.D.	9.7%
M.D., D.O., D.D.S., or D.V.M.	5.6%

Highest degree planned anywhere: (Continued)

LL.B. or J.D.	3.7%
B.D. or M.Div.	0.3%
Other	1.6%

Probable major field of study:

Arts and Humanities	
Art, fine and applied	2.1%
English	1.2%
History	0.7%
Journalism	1.6%
Foreign language	0.6%
Music	1.1%
Philosophy	0.1%
Speech	0.1%
Theater or drama	0.6%
Theology or religion	0.2%
Other	0.7%
Biological Science	
Biology (general)	1.9%
Biochemistry or biophysics	0.5%
Botany	0.1%
Marine science	0.4%
Microbiology or bacteriology	0.2%
Zoology	0.3%
Other	0.5%
Business	
Accounting	6.2%
Business administration (general)	7.6%
Finance	1.8%
Marketing	2.7%
Management	5.4%
Secretarial studies	1.5%
Other	1.7%
Education	
Business education	0.3%
Elementary education	3.9%
Music or art education	0.3%
Physical education or recreation	1.3%
Secondary education	1.3%
Special education	0.7%
Other	0.3%
Engineering	
Aeronautical engineering	1.6%
Civil engineering	0.9%
Chemical engineering	0.7%
Electrical or electronic engineering	3.8%
Industrial engineering	0.4%
Mechanical engineering	2.0%
Other	1.5%
Physical Science	
Astronomy	0.1%
Atmospheric science	0.1%
Chemistry	0.7%
Earth science	0.2%
Marine science	0.1%
Mathematics	0.7%
Physics	0.4%
Statistics	0.0%
Other	0.1%
Professional	
Architecture, urban planning	1.0%
Home economics	0.4%
Health technology	1.1%
Library science	0.0%
Nursing	2.7%
Pharmacy	0.6%
Pre-dental, pre-medical, pre-veterinary	2.9%
Therapy (physical, occupational, etc.)	1.8%
Other	1.2%
Social Science	
Anthropology	0.1%
Economics	0.5%
Ethnic studies	0.0%
Geography	0.0%
Political science	2.5%
Psychology	3.4%
Social work	1.0%
Sociology	0.3%
Women's studies	0.0%
Other	0.2%
Technical	
Building trades	0.3%
Data processing, computer programming	1.6%
Drafting or design	0.6%
Electronics	0.5%
Mechanics	0.5%
Other	0.5%
Other Fields	
Agriculture	1.2%
Communications	2.5%
Computer science	1.9%
Forestry	0.6%
Law enforcement	1.4%

Probable major field of study: Other Fields (Continued)

Military science	0.1%
Other	1.4%
Undecided	6.5%

Probable career occupation:

Accountant or actuary	5.9%
Actor or entertainer	1.0%
Architect or urban planner	1.5%
Artist	1.6%
Business (clerical)	1.4%
Business executive	12.9%
Business proprietor	3.7%
Business salesperson or buyer	1.6%
Clergy (minister or priest)	0.2%
Clergy (other)	0.1%
Clinical psychologist	1.4%
Computer programmer or analyst	3.5%
Conservationist or forester	0.8%
Dentist	0.6%
Dietitian or home economist	0.2%
Educator (college)	0.3%
Educator (elementary)	4.4%
Educator (secondary)	2.9%
Engineer	9.7%
Farmer or rancher	0.6%
Foreign-service worker	1.0%
Homemaker (full-time)	0.1%
Interior decorator	0.6%
Interpreter	0.2%
Journalist or writer	2.3%
Lab technician or hygienist	0.7%
Law-enforcement officer	1.1%
Lawyer or judge	4.0%
Military person	1.3%
Musician	1.1%
Nurse	2.7%
Optometrist	0.2%
Pharmacist	0.7%
Physician	3.7%
Research scientist	1.4%
School counselor	0.3%
School principal	0.0%
Social, welfare, or recreation worker	1.4%
Statistician	0.1%
Therapist	2.1%
Veterinarian	0.9%
Skilled trades	1.4%
Other occupation	6.8%
Undecided	11.6%

Estimated parental income:

Less than $6,000	3.9%
$6,000-$9,999	3.7%
$10,000-$14,499	6.4%
$15,000-$19,999	6.5%
$20,000-$24,999	7.9%
$25,000-$29,999	8.2%
$30,000-$34,999	10.4%
$35,000-$39,999	9.7%
$40,000-$49,999	12.4%
$50,000-$59,999	10.2%
$60,000-$74,999	8.3%
$75,000-$99,999	5.3%
$100,000-$149,999	3.6%
$150,000 or more	3.6%

Number of parents' dependents:

One	7.5%
Two	14.5%
Three	22.3%
Four	28.2%
Five	17.1%
Six or more	10.4%

Number of other dependents currently attending college:

None	69.2%
One	23.3%
Two	5.5%
Three or more	2.0%

Concern about financing college:

None	36.3%
Some	49.6%
Major	14.1%

Support from parental aid:

None	26.6%
$1-$499	10.9%
$500-$999	8.3%
$1,000-$1,499	7.8%
$1,500-$1,999	5.3%
$2,000-$3,000	9.2%
Over $3,000	31.9%

Other savings:

None	74.0%
$1-$499	13.4%
$500-$999	5.2%

Note: Because of multiple responses, sections may not add to 100 per cent.

Continued on Following Page

FACT-FILE—Continued

Other savings: (Continued)

$1,000-$1,499	3.1%
$1,500-$1,999	1.2%
$2,000-$3,000	1.2%
Over $3,000	1.9%

Support from Pell Grant:

None	83.1%
$1-$499	4.4%
$500-$999	4.9%
$1,000-$1,499	3.6%
$1,500-$1,999	2.5%
$2,000-$3,000	1.5%

Support from Supplemental Educational Opportunity Grant:

None	94.7%
$1-$499	1.9%
$500-$999	1.6%
$1,000-$1,499	1.0%
$1,500-$1,999	0.5%
$2,000-$3,000	0.3%

Support from state scholarship or grant:

None	86.5%
$1-$499	5.1%
$500-$999	3.7%
$1,000-$1,499	2.6%
$1,500-$1,999	1.2%
$2,000-$3,000	0.9%

Support from college grant:

None	82.2%
$1-$499	3.9%
$500-$999	4.1%
$1,000-$1,499	3.1%
$1,500-$1,999	1.4%
$2,000-$3,000	2.0%
Over $3,000	3.3%

Support from private grant:

None	93.1%
$1-$499	2.7%
$500-$999	1.9%
$1,000-$1,499	1.1%
$1,500-$1,999	0.4%
$2,000-$3,000	0.5%
Over $3,000	0.4%

Support from College Work-Study grant:

None	89.6%
$1-$499	3.5%
$500-$999	3.9%
$1,000-$1,499	2.2%
$1,500-$1,999	0.6%
$2,000-$3,000	0.2%

Support from part-time employment:

None	66.7%
$1-$499	20.0%
$500-$999	8.4%
$1,000-$1,499	3.2%
$1,500-$1,999	0.8%
$2,000-$3,000	0.4%
Over $3,000	0.3%

Support from summer employment:

None	49.9%
$1-$499	23.9%
$500-$999	14.0%
$1,000-$1,499	7.5%
$1,500-$1,999	2.4%
$2,000-$3,000	1.6%
Over $3,000	0.7%

Support from federal Guaranteed Student Loan:

None	74.6%
$1-$499	1.5%
$500-$999	3.1%
$1,000-$1,499	5.0%
$1,500-$1,999	9.0%
$2,000-$3,000	6.6%

Support from college loan:

None	96.0%
$1-$499	0.7%
$500-$999	0.9%
$1,000-$1,499	0.8%
$1,500-$1,999	0.5%
$2,000-$3,000	0.7%
Over $3,000	0.5%

Support from National Direct Student Loan:

None	93.8%
$1-$499	1.1%
$500-$999	1.8%
$1,000-$1,499	1.5%
$1,500-$1,999	1.1%
$2,000-$3,000	0.6%

Attitudes and Activities

	All institutions			2-year colleges		4-year colleges				Universities		Predominantly black colleges	
	Men	Women	Total	Public	Private	Public	Pvt., non-sectarian	Protestant	Catholic	Public	Private	Public	Private
Activities in the past year:													
Used a personal computer*	26.9%	21.8%	24.2%	19.9%	19.8%	26.4%	25.1%	23.9%	24.0%	27.8%	30.6%	23.6%	27.2%
Played a musical instrument	39.1%	44.9%	42.2%	35.9%	39.9%	41.8%	47.1%	51.2%	42.0%	46.1%	50.9%	41.7%	45.5%
Attended a religious service	80.0%	86.1%	83.2%	78.0%	88.2%	86.0%	84.1%	90.3%	92.1%	83.2%	85.3%	89.2%	93.9%
Participated in a speech or debate	23.2%	23.6%	23.4%	16.8%	21.4%	25.2%	28.7%	27.2%	25.7%	26.7%	31.2%	28.4%	37.0%
Was president of one or more student organizations	24.8%	27.7%	26.3%	19.3%	27.4%	27.5%	30.6%	31.7%	29.6%	29.0%	37.8%	34.0%	41.9%
Was bored in class	90.5%	91.2%	90.9%	84.5%	90.5%	92.9%	93.9%	94.5%	94.4%	95.2%	94.8%	86.0%	90.0%
Had a major part in a play	17.4%	17.5%	17.5%	13.8%	19.0%	18.5%	22.6%	23.4%	18.3%	17.3%	20.3%	25.6%	28.1%
Won a varsity letter in sports	54.4%	38.5%	46.1%	37.1%	46.6%	50.9%	49.2%	52.7%	52.3%	49.8%	50.2%	46.5%	43.9%
Didn't complete homework on time	72.9%	65.0%	68.8%	64.0%	74.5%	70.8%	72.3%	72.6%	70.9%	70.8%	66.7%	67.5%	72.4%
Won an award in an art contest	16.7%	15.9%	16.3%	14.4%	20.2%	15.9%	21.0%	17.0%	16.7%	16.5%	17.0%	18.5%	19.1%
Edited the school paper, yearbook, or magazine	13.1%	22.4%	18.0%	13.6%	17.0%	18.5%	22.9%	19.9%	21.0%	19.3%	26.2%	15.2%	19.7%
Tutored another student	40.0%	43.1%	41.6%	30.0%	29.4%	43.0%	48.1%	44.1%	48.0%	51.4%	62.4%	38.1%	53.4%
Wrote a computer program	52.8%	39.0%	45.6%	41.3%	36.4%	48.6%	45.1%	45.3%	47.5%	49.9%	49.5%	40.8%	47.6%
Participated in a science contest	18.3%	12.0%	15.0%	10.5%	15.4%	16.1%	16.8%	17.0%	15.3%	18.3%	20.6%	21.7%	27.1%
Did extra course work or reading*	9.6%	13.7%	11.8%	8.5%	11.7%	12.4%	14.8%	12.8%	12.8%	13.3%	17.3%	16.3%	21.9%
Was a guest in a teacher's home	32.8%	32.9%	32.9%	26.2%	35.6%	34.9%	38.8%	43.0%	34.0%	34.0%	37.2%	42.2%	39.5%
Studied with other students	84.8%	89.3%	87.2%	80.2%	86.2%	89.4%	90.2%	90.7%	92.1%	91.7%	92.3%	89.8%	92.5%
Overslept and missed class or an appointment	31.7%	29.8%	30.7%	29.4%	33.8%	29.7%	33.5%	31.3%	32.2%	31.5%	31.7%	31.3%	30.9%
Smoked cigarettes*	7.9%	11.5%	9.8%	15.1%	13.5%	7.6%	8.2%	6.1%	8.5%	6.0%	5.2%	3.8%	2.7%
Performed volunteer work	67.4%	71.1%	69.4%	63.3%	70.8%	70.4%	73.5%	74.6%	77.4%	70.7%	79.1%	68.7%	74.7%
Missed school because of illness*	2.9%	5.8%	4.4%	3.6%	7.0%	4.7%	5.4%	5.2%	5.2%	4.1%	4.3%	7.6%	5.3%
Attended a recital or concert	72.7%	79.0%	76.0%	67.7%	76.2%	78.0%	81.7%	81.6%	80.7%	80.3%	83.7%	74.8%	81.5%
Drank beer	72.8%	60.7%	66.5%	67.7%	63.0%	66.2%	60.1%	56.3%	74.5%	71.1%	62.8%	37.2%	35.1%
Stayed up all night	77.4%	75.7%	76.5%	74.4%	77.4%	77.0%	77.1%	76.8%	79.0%	78.8%	75.8%	71.4%	76.3%
Felt overwhelmed*	12.9%	21.6%	17.5%	13.0%	18.9%	18.3%	19.9%	22.0%	21.1%	19.8%	20.2%	16.8%	17.8%
Felt depressed*	6.4%	10.3%	8.4%	7.6%	11.2%	9.0%	9.0%	10.4%	8.8%	7.9%	7.7%	11.1%	11.2%
Political views:													
Far left	2.5%	1.5%	2.0%	2.2%	2.4%	1.9%	2.2%	2.0%	1.6%	1.7%	1.7%	3.7%	3.5%
Liberal	21.2%	22.7%	22.0%	19.2%	21.0%	21.9%	26.6%	21.8%	22.4%	23.7%	25.5%	26.2%	34.6%
Middle of the road	51.9%	59.8%	56.0%	62.0%	59.0%	56.6%	48.4%	50.7%	54.6%	53.4%	44.7%	50.1%	44.5%
Conservative	22.4%	15.4%	18.7%	15.2%	16.3%	18.3%	21.3%	24.0%	20.3%	20.1%	26.8%	17.5%	16.4%
Far right	2.0%	0.7%	1.3%	1.4%	1.3%	1.3%	1.4%	1.5%	1.0%	1.2%	1.3%	2.5%	1.1%
Agree strongly or somewhat that:													
Government isn't protecting the consumer	58.5%	66.7%	62.8%	66.6%	66.4%	63.7%	62.3%	62.2%	61.8%	58.0%	53.8%	74.4%	73.9%
Government isn't promoting disarmament	58.6%	72.8%	66.0%	65.0%	62.0%	65.6%	69.6%	66.6%	70.4%	65.7%	68.4%	74.6%	78.4%
Government isn't controlling pollution	76.3%	79.6%	78.0%	77.4%	76.3%	78.0%	80.5%	78.2%	78.2%	77.7%	79.1%	76.9%	80.4%
Government should discourage the use of energy	67.0%	72.2%	69.7%	68.4%	67.1%	70.9%	71.6%	69.2%	69.9%	70.2%	70.1%	69.2%	70.9%
Taxes should be raised to reduce the federal deficit	27.4%	19.4%	23.2%	19.6%	20.5%	23.4%	25.4%	25.0%	22.8%	26.7%	28.5%	23.1%	18.1%
Military spending should be increased	34.8%	19.7%	26.9%	27.9%	29.8%	29.3%	23.9%	26.2%	22.0%	25.7%	22.4%	31.2%	20.9%
Nuclear disarmament is attainable	52.7%	56.4%	54.6%	54.4%	53.7%	55.3%	55.8%	54.5%	57.2%	54.0%	52.9%	52.4%	55.2%
The death penalty should be abolished	21.4%	29.1%	25.4%	24.2%	26.9%	25.8%	29.2%	26.9%	31.8%	22.8%	28.3%	45.4%	41.1%
We need a national health-care plan	58.8%	65.2%	62.1%	67.0%	67.4%	62.5%	62.6%	58.9%	62.1%	55.8%	53.8%	75.8%	74.2%
Abortion should be legalized	58.3%	59.0%	58.6%	55.9%	52.9%	60.4%	60.1%	52.8%	46.4%	65.8%	57.9%	56.3%	66.0%
High-school grading was too easy	49.7%	47.9%	48.7%	46.2%	42.0%	47.0%	50.8%	51.3%	49.5%	52.2%	56.9%	35.5%	37.8%
Women's activities should be confined to the home	27.0%	14.3%	20.3%	22.3%	23.2%	20.7%	19.6%	20.6%	19.7%	17.2%	17.7%	33.1%	22.6%
Couples should live together before marriage	56.0%	46.8%	51.1%	55.3%	47.3%	50.4%	49.0%	39.7%	43.7%	52.9%	46.7%	52.4%	49.8%
Women should have job equality	87.3%	96.3%	92.0%	90.4%	90.8%	92.3%	92.6%	92.4%	92.6%	93.6%	94.0%	89.0%	93.3%
The wealthy should pay a larger share of taxes	72.8%	71.5%	72.1%	74.5%	68.4%	74.3%	69.5%	70.5%	69.1%	70.3%	66.3%	73.1%	75.9%
Marijuana should be legalized	25.0%	18.0%	21.3%	22.4%	21.2%	20.7%	21.8%	16.6%	18.9%	22.7%	19.2%	22.5%	18.3%
Busing to achieve racial balance in schools is all right	53.6%	58.4%	56.1%	59.2%	60.8%	55.9%	57.7%	55.6%	56.1%	51.4%	50.5%	69.7%	71.3%
Homosexual relations should be prohibited	62.5%	42.8%	52.2%	58.1%	60.6%	52.4%	47.8%	55.0%	47.9%	45.6%	40.5%	60.0%	56.2%
Colleges have the right to regulate off-campus behavior	13.7%	11.2%	12.4%	13.1%	14.6%	12.9%	13.8%	13.6%	10.9%	9.4%	11.9%	27.1%	19.6%
Students should help evaluate faculty members	70.4%	70.2%	70.3%	66.4%	63.8%	69.9%	72.6%	71.1%	71.6%	75.1%	76.9%	63.9%	67.9%
Colleges have the right to ban a speaker	28.0%	23.4%	25.6%	28.1%	30.4%	25.5%	24.5%	25.5%	24.9%	22.3%	22.1%	33.0%	27.1%
Colleges should divest of South African investments	50.7%	43.3%	46.9%	42.9%	38.6%	46.5%	52.9%	46.5%	47.5%	50.2%	56.3%	47.3%	59.5%
Chief benefit of college is to increase earnings	74.3%	67.5%	70.7%	77.7%	72.5%	71.9%	62.1%	64.7%	66.4%	68.3%	56.0%	80.1%	77.6%
Objectives considered essential or very important:													
Achieving in a performing art	9.7%	11.3%	10.5%	7.3%	12.2%	11.1%	15.7%	12.8%	10.7%	10.6%	14.3%	14.7%	12.8%
Becoming an authority in his or her field	72.4%	71.3%	71.8%	68.1%	70.9%	73.9%	72.2%	71.1%	72.5%	74.9%	74.4%	77.7%	83.9%
Obtaining recognition from colleagues	55.1%	54.3%	54.7%	50.3%	54.4%	57.1%	55.6%	52.3%	56.3%	58.4%	57.5%	60.9%	68.4%
Influencing the political structure	17.1%	12.3%	14.5%	10.9%	13.6%	15.4%	18.0%	16.0%	17.7%	15.7%	19.8%	24.7%	28.0%
Influencing social values	29.3%	35.3%	32.5%	28.3%	36.1%	33.6%	38.3%	38.0%	37.1%	31.4%	35.0%	43.9%	47.4%
Raising a family	66.3%	67.7%	67.0%	64.3%	67.9%	67.3%	68.0%	70.7%	70.8%	67.4%	72.5%	56.5%	62.9%
Having administrative responsibility	45.2%	43.4%	44.2%	43.0%	43.9%	46.6%	41.5%	41.1%	47.0%	45.8%	42.7%	51.7%	53.8%
Being very well-off financially	76.9%	69.8%	73.2%	75.6%	73.4%	73.9%	68.1%	65.3%	71.0%	74.5%	68.5%	84.9%	87.1%
Helping others who are in difficulty	48.0%	65.5%	57.2%	52.6%	62.4%	59.4%	62.3%	63.0%	61.6%	55.5%	60.2%	69.2%	75.5%
Making a contribution to scientific theory	16.0%	9.5%	12.6%	10.7%	9.1%	12.3%	13.5%	10.4%	10.9%	16.2%	16.9%	15.7%	20.6%
Writing original works	11.0%	11.5%	11.3%	7.9%	10.0%	11.9%	16.2%	12.6%	12.0%	12.3%	16.1%	13.9%	14.1%
Creating artistic works	10.0%	11.8%	10.9%	8.7%	14.3%	10.5%	17.0%	10.6%	10.8%	11.7%	11.9%	12.6%	10.5%
Being successful in his or her own business	53.5%	44.9%	49.0%	49.2%	56.5%	47.8%	49.7%	46.7%	51.1%	49.4%	45.4%	63.5%	67.9%
Helping clean up the environment	18.7%	13.5%	15.9%	16.0%	18.2%	16.0%	17.9%	15.5%	14.5%	15.2%	14.4%	24.9%	25.9%
Developing a philosophy of life	40.7%	40.6%	40.6%	33.6%	42.0%	41.3%	48.6%	45.2%	42.9%	42.8%	50.8%	53.1%	62.6%
Participating in community action	16.3%	20.4%	18.5%	14.3%	20.8%	19.8%	22.5%	22.2%	21.7%	19.0%	21.6%	31.4%	39.9%
Promoting racial understanding	25.3%	29.0%	27.2%	21.3%	28.3%	29.5%	35.7%	31.1%	30.3%	26.8%	33.9%	58.7%	70.8%
Being an expert on finance and commerce	30.1%	20.8%	25.2%	22.8%	24.0%	27.3%	24.4%	23.9%	29.0%	26.7%	26.6%	41.6%	41.1%

* Frequently only; all other activities frequently or occasionally

SOURCE: "THE AMERICAN FRESHMAN: NATIONAL NORMS FOR FALL 1986," BY ALEXANDER W. ASTIN, PUBLISHED BY AMERICAN COUNCIL ON EDUCATION AND UNIVERSITY OF CALIFORNIA AT LOS ANGELES

Side-lines

The popularity of this year's Fiesta Bowl, which matched the college football teams ranked No. 1 and No. 2, has prompted the National Collegiate Athletic Association once again to consider a national championship game.

Sunkist Growers, Inc., sponsors of the Fiesta Bowl, came up with nearly $5-million to get the two top teams, from the University of Miami and Pennsylvania State University. The game, played in prime time on January 2, the day after other major bowls, drew a record television audience for a college football game—almost 22 million fans.

Penn State won and was voted unofficial national champion in wire-service polls.

Last week, after having had several days to savor the figures from the Fiesta Bowl, the N.C.A.A.'s post-season football committee named a panel to look into establishing a championship game.

All other sections of the association except Division I-A, which is composed of the top 105 teams, play football championship games. But few at the N.C.A.A. convention last week were willing to bet that such a game will ever come to pass. The idea has never come to a convention vote.

One reason for opposition to a championship: Colleges with big-time sports programs are under pressure from reformers to cut schedules and lessen commercialism. A "College Super Bowl" would undoubtedly be interpreted as a move in the wrong direction.

In addition, the traditional bowl games, which provide more than $40-million a year to college football, are opposed to the creation of a game that would reduce their contests to something akin to semifinals.

Officials of bowl games did not appear to be worried last week about the prospects of being downgraded. Said the Sugar Bowl's Mickey Holmes: "It's a perennial topic, like ragweed."

▪

The academic programs at Florida State University and Indiana University are each $100,000 richer as a result of the two institutions' participation in the All-American Bowl.

Bowl-game money usually goes to colleges' athletic departments. But the Russell Corporation, which bills itself as the nation's largest manufacturer of athletic uniforms, put a restriction on the $200,000 it donated to the bowl: It was to go to the academic scholarship funds at the universities whose teams played in the game. The bowl and the company say it's the first time a commercial sponsor of a football has limited its contribution that way.

▪

Overheard in front of the San Diego Zoo's gorilla house during a break in last week's meeting of the American Football Coaches Association: A woman said to a man, "Now dear, don't you go recruiting any of them."

Athletics

Lawsuit, High Costs, and Low Failure Rate Keep Drug Testing of Athletes in Headlines

Stanford diver sues NCAA; $1-million shifted to defray costs; Berkeley says it's not suspending tests

SAN DIEGO

Testing of college athletes for drugs continues to generate headlines and controversy, weeks after the first disqualifications of players.

Just last week, for example:

► The captain of the women's swimming team at Stanford University filed a lawsuit challenging the National Collegiate Athletic Association's testing program. Simon LeVant, a diver, said she was unfairly declared ineligible because she refused to sign a form consenting to urinalysis at the N.C.A.A. championship. Stanford does not routinely test its athletes for drugs.

► A player who protested his disqualification from a bowl game for having failed the N.C.A.A.'s drug test was told by his coach that he was not wanted on the team next season. Brian Bosworth of the University of Oklahoma had blasted the N.C.A.A. at a press conference and showed up at the bowl game wearing a T-shirt that characterized the association as "National Communists Against Athletes." After Mr. Bosworth issued a public apology, the coach said he might reconsider his decision.

► The University of California at Berkeley, which had confirmed last month that it had suspended its testing program because of a threatened lawsuit, announced that that was not the case. Berkeley officials said last week that no testing was scheduled from mid-December until late this month. During that time, they are holding discussions on possible alternatives to the tests. But a lawyer for the American Civil Liberties Union said the university had promised him to hold testing "in abeyance" after he threatened a suit.

► The N.C.A.A.'s executive committee announced that it would allocate $1-million from the association's surplus to help pay for the drug-testing program.

► N.C.A.A. officials said they were surprised that only about 2 per cent of the first 1,050 athletes tested showed evidence of having used drugs. They said they had expected the rate to be as high as 10 per cent.

A total of 21 players were barred from football championships or bowl games as part of an automatic 90-day suspension for failing the test.

Athletes May Have Anticipated Tests

John R. Toner, director of athletics at the University of Connecticut and former president of the N.C.A.A., said that the low rate may have resulted from athletes anticipating the tests and steering clear of drugs.

Of those who had tested positive for drug use so far, most have used anabolic steroids, which are muscle-building hormones that add strength and bulk but have damaging side effects.

Many athletes who tested positive for steroids said they had stopped using the drug months ago but that the evidence remained in their systems.

In only a few cases have athletes tested

Continued on Following Page

NCAA Division II Votes Academic Rules over Objections of Black Colleges

By CHARLES S. FARRELL

SAN DIEGO

After a lengthy debate and a close vote, the National Collegiate Athletic Association's Division II voted last week to adopt academic standards for freshman athletes that are identical to those already in effect in the association's top competitive section, Division I.

Effective August 1, 1988, freshmen who wish to play sports at Division II institutions must have a 2.0 grade-point average in a core curriculum of 11 academic courses in high school, plus a score of at least 700 on the Scholastic Aptitude Test or 15 on the American College Testing program's examination.

The new standards were strongly opposed by the approximately 30 black colleges in Division II, but in a roll-call vote, the proposal passed, 93 to 70.

Standardized Tests Opposed

Proponents of the standards argued that the rules were not especially stringent and that they were necessary to prevent Division II institutions from becoming a "dumping ground" for academically unqualified athletes.

Officials of black colleges vehemently opposed the inclusion of standardized-test scores in the regulations, noting that black students have historically scored lower on such tests than white students.

Black-college officials reminded their colleagues that since the standards went into effect in Division I last August, 85 per cent of the approximately 400 disqualified athletes have been black. They also pointed out that an N.C.A.A. study found that many black athletes who eventually received college degrees would not have been eligible to play sports as freshmen.

Lloyd D. Vincent, president of Angelo State University, a predominantly white institution, said the new standards were "necessary in order to provide a balance between the academics at an institution and an athletic program. This will ensure equity in athletic competition by preventing some institutions from having lower admission standards in order to compete. Those institutions abuse their regular admissions process."

He noted that some Division II institu-

Continued on Following Page

NCAA Posts $5.8-Million Surplus, Believed to Be Group's Biggest Ever

SAN DIEGO

Boosted by a $5.7-million increase in income from its Division I men's basketball championship, the National Collegiate Athletic Association last week reported a surplus of $5.8-million for its fiscal year that ended last August 31.

It is believed to be the largest surplus in N.C.A.A. history. The surplus in the 1984-85 fiscal year was just over $1-million.

Revenues in 1985-86 totaled $51.4-million, up 17 per cent from 1984-85. In the same period, expenses rose 6 per cent, to $45.6-million.

Nearly 70 per cent of the total revenue, $35.5-million, was returned to member institutions, primarily to pay for expenses associated with championships.

Revenues from the popular Division I men's basketball championship provided some $39-million of the $51.4-million total.

Other revenue increases reported: other Division I championships, up $700,000; dues, up $200,000; and publishing, up $100,000.

The N.C.A.A.'s executive committee has allocated the surplus in the following fashion:

► $1.15-million to Division II and Division III to help pay for their championships, which usually operate at a loss.

► $1-million to the association's drug-testing program, which is exceeding early cost estimates.

► $1-million to purchase equipment, including expansion of computer capabilities.

► $1.5-million to the association's operating reserve. With the addition, the reserve fund will total about $7.2-million, more than 60 per cent of the way toward the association's goal of setting aside the amount needed to meet one year's cost of essential services.

Changes Since 1980-81

Here is how the N.C.A.A.'s revenues, expenses, and surpluses have changed since 1980-81:

Year	Revenue	Expenses	Deficit or Surplus
1980-81 ..	$23,300,000	$22,400,000	$900,000
1981-82 ..	28,800,000	29,000,000	-200,000
1982-83 ..	33,200,000	30,100,000	3,100,000
1983-84 ..	40,000,000	37,400,000	2,600,000
1984-85 ..	43,900,000	42,800,000	1,100,000
1985-86 ..	51,400,000	45,600,000	5,800,000

1/21/87 C2175-1

THE CHRONICLE
of Higher Education.

ISSN 0009-5982

January 21, 1987 • $1.95
Volume XXXIII, Number 19

News Summary

Articles on inside pages

The rail gun, a weapon designed for the Star Wars program, is being refined by scientists for battlefield use. Story on Page 4.

The Rev. Charles Curran has been suspended from teaching classes at Catholic University. Story on Page 13.

A federal appeals court has ruled that a college teacher can be fired for swearing in the classroom. Story on Page 13.

Three new chancellors of state university systems are demonstrating their ability to balance conflicting demands. Story on Page 18.

Education Secretary William J. Bennett clashed with two Senate committees last week over the Reagan budget. Story on Page 18.

About 86 per cent of all college students attend institutions in their home states, according to a government report. Story on Page 31.

Reform dominated this month's meeting of the N.C.A.A., as college presidents cemented their leadership role. Story on Page 33.

Nott Memorial, a run-down Victorian Gothic structure, is the centerpiece of the campus of Union College in New York. Story on Page 26.

Students and officials of Mexico's National Autonomous University have failed to resolve their, long conflict. Story on Page 37.

A shift to the center is taking place on campuses in the Philippines. Story on Page 37.

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Pentagon Planning to Restrict Access to Public Data Bases

By JUDITH AXLER TURNER

WASHINGTON

The Defense Department is planning to restrict access to government and commercial electronic data bases. The idea has prompted concern—but little action—in academic and scientific organizations.

Pentagon officials say the restrictions, authorized by the White House but not yet put into effect, are necessary to keep scientific, technical, and economic information from foreign agents, particularly those from the Soviet bloc.

Opponents of the Administration's effort, principally business and civil-liberties interests, are also concerned about a new office in the National Security Agency that is responsible for the security of all computer systems that may contain sensitive information—whether or not collected and stored by government agencies, whether or not classified or directly related to national security.

Data-base services that would come un-

Continued on Page 10, Column 1

'A REALLY SURPRISING SHIFT'

Poll Finds Sharp Rise in Support for U.S. Funds for College Students

By JEAN EVANGELAUF

Popular support for federal aid to college students is up sharply, according to a nationwide opinion poll out this week.

Over half of the public now strongly favors continued federal spending on grants and low-interest loans, the survey found.

That endorsement of student-aid programs follows three years in which the annual poll revealed steady declines in support for federal spending for college students.

Concern about college costs is also on the rise, the survey showed. About two-thirds of those polled agreed that most people today can't afford to pay for college, and most said they believed the affordability problem would get worse, not better.

The survey, which was conducted last month by Opinion Research Corporation of Princeton, N.J., showed a substantial shift in thinking about federal student assistance:

► 55 per cent of the public strongly support spending on grants to low-income students, compared with 46 per cent the year before.

► 54 per cent strongly favor spending on low-interest loans to middle-income students, up from only 40 per cent the previous year.

► 46 per cent strongly believe in providing money to colleges that have a large percentage of low-income students, compared with 37 per cent in 1985.

The responses come on the heels of President Reagan's proposal to slash student-aid spending by 45 per cent for fiscal 1988.

5th Annual Survey

Under the Administration's plan, about one of every six students currently eligible for aid would no longer qualify for help, and interest rates on federal loans would be tied to market rates.

The telephone poll—the fifth annual survey of public attitudes toward higher education—was sponsored by the Council for Advancement and Support of Education and covered 1,010 adults nationwide.

Gary H. Quehl, president of the council, said it was important that the Reagan Administration and members of Congress realize the public's view on student-aid spending.

Although still a minority, a growing number of Americans believe that the qual-

Continued on Page 25, Column 1

China's Apparent Tolerance of Student Protests Gives Way to Crackdown; 2 Academics Fired

BEIJING

The Chinese government's reaction to recent student demonstrations for democracy and other reforms entered a harsh new phase last week, strongly indicating that earlier signs of official tolerance were giving way to a broad crackdown against intellectuals.

Some Western analysts said the backlash could jeopardize the entire modernization program under Deng Xiaoping, the nation's top leader, although Chinese officials maintained that economic reforms would continue.

As the demonstrations subsided and students became preoccupied with mid-semester examinations, there were these developments:

► Mr. Deng, in his first public comments on the month-long series of protests by university students in at least a dozen Chinese cities, called the unrest a mistake and blamed right-wing elements for encouraging it.

► Vice-president Fang Lizhi of the University of Science and Technology in Hefei, an astrophysicist who had become a hero to student activists, was fired for defaming Communist Party leaders and slan-

Continued on Page 38, Column 2

Philanthropy Groups Assail U.S. Limits on Lobbying

Proposed federal limits on lobbying by charities would have a "chilling" effect on foundation support for social-policy studies, say leaders of organized philanthropy. See Page 29.

'Campus Compact' Project Stresses Public-Service Commitment by Students

© 1986 NANCY KAYE

Paul Lipson, a Brown University student volunteer, helped create a garden in the South Bronx.

By ELIZABETH GREENE

If the people who make up Campus Compact could have as much success motivating students as they have had inspiring one another, student apathy would soon fade into obsolescence.

The college and university presidents and chancellors who compose the group, now numbering about 120 and growing, have been meeting for more than a year to devise ways of strengthening students' commitment to public service. Each time, the presidents return to their campuses reinvigorated and with a plethora of ideas.

Now, they say, they are ready for the real work: turning the talk into action.

Donald Kennedy, president of Stanford University, founded the group with the Rev. Timothy S. Healy and Howard R. Swearer, presidents of Georgetown and Brown Universities, respectively, on the premise that participation in community service is essential to a good education (*The Chronicle*, October 23, 1985). Mr. Kennedy says "we have a success on our hands" in terms of membership.

But he asks: "How do you institutionalize public service and begin to relate it to the curriculum and really make it an organic part of the institutions that belong to Compact?

"One doesn't really know how that is going to go."

Promoting Civic-Mindedness

The group, a project of the Education Commission of the States and its president, Frank Newman, believes that higher-education institutions have a responsibility for promoting civic-mindedness among their students, and that the apathy of to-

Continued on Page 32, Column 1

Rise in Support for Student Aid Found in Poll

Continued from Page 1

ity of a college education is deteriorating, according to the survey results. In 1986, 21 per cent said that quality was declining and 36 per cent said it was improving. In 1985, 16 per cent believed the quality was dropping and 44 per cent felt it was improving.

Walter K. Lindenmann, vice-president of Opinion Research, said that growing support for federal aid to college students seemed to go hand-in-hand with growing worries about costs.

The attitudes about aid show "a really surprising shift," he said. "Something is going on out there, and my assumption is that people are getting hit in the pocketbook."

He cited these survey responses as indicating concern about paying for college:

► Only about one in three of those polled said most people could currently afford a college education.

► The proportion who said costs were rising at a rate that would put a college education out of the reach of most Americans increased from 77 per cent to 82 per cent over the last year.

► 70 per cent said they would need grants or low-interest loans to pay for college, even though the number who said they were better able to pay for college now than they were five years ago edged up to 52 per cent.

'I'm in a Box Here'

The shift in public attitudes about student aid could also be a reaction to the more stringent eligibility regulations that Congress enacted last year and to the Reagan Administration's continuing efforts to cut aid, Mr. Lindenmann said. "It appears as if the public is registering a considerable amount of unhappiness over those tighter requirements and on new restrictions relating to federal student aid," he said.

In summarizing the survey results, Mr. Lindenmann said they indicated a sense of frustration. "People seem to be saying, 'I recognize I'm in a box here,' " he said. " 'I need a college degree to get a job, so I've got to go to college, but I can't afford to go.' And then some are saying, 'I am disturbed that maybe the quality of college is declining.' "

In other areas, the survey report gave these findings:

► 32 per cent of the public said it was "very" or "somewhat" likely that they would make a donation to a college or university during the next two years. Half of the college graduates polled said they were likely to make a donation, compared with 22 per cent of those who had not attended college.

► Opinion about the fairness of standardized examinations such as the Scholastic Aptitude Test in measuring the academic abilities students need to succeed in college was mixed. About 54 per cent said they thought the tests were fair, 22 per cent thought they were not fair, and 24 per cent were not sure. Those percentages have changed little from 1984, the year the question was first asked.

► While most people think a college degree is necessary for career advancement, considerably fewer believe college is very important for later life. Nearly 60 per cent said college was "very important" in getting a job or advancing in one's career, but only 44 per cent agreed that what one learns in college was "very important" for later life. The latter finding indicates "cynicism" toward higher education, Mr. Lindenmann said.

► About one-quarter of Americans would attend a vocational or technical school if they were to begin or return to college. The other choices, in descending order, were as follows: public four-year college, 22 per cent; public community college, 17 per cent; public university, 13 per cent; private four-year college, 9 per cent; private university, 4 per cent; private two-year college, 3 per cent; and other, 9 per cent. The most significant change in that ordering over the last three years is that the percentage selecting a public university has nearly doubled.

Copies of the survey report, *American Attitudes Toward Higher Education 1986*, may be purchased for $25 each from Opinion Research Corporation, P.O. Box 183, Princeton, N.J. 08542.

How the Public Views Higher Education

Support for federal aid	1983	1984	1985	1986
Grants to low-income students				
Strongly favor	50%	53%	46%	55%
Somewhat favor	35%	35%	38%	32%
Somewhat oppose	10%	7%	8%	7%
Strongly oppose	4%	4%	6%	3%
Low-interest loans to middle-income students				
Strongly favor	51%	46%	40%	54%
Somewhat favor	39%	39%	41%	35%
Somewhat oppose	6%	7%	12%	6%
Strongly oppose	3%	4%	6%	3%
Aid to colleges with a large percentage of low-income students				
Strongly favor	50%	46%	37%	46%
Somewhat favor	34%	39%	45%	36%
Somewhat oppose	10%	7%	10%	8%
Strongly oppose	4%	4%	6%	5%
College costs				
College costs are rising at a rate that will put college out of reach of most people				
Agree	80%	80%	77%	82%
Disagree	17%	17%	22%	16%
Most people can afford to pay for a college education				
Agree	33%	36%	39%	32%
Disagree	64%	61%	60%	65%
I would be able to afford college at this time only with low-interest loans or grants				
Agree	68%	75%	70%	70%
Disagree	27%	21%	28%	27%
I am better able to afford college today than I would have been five years ago				
Agree	48%	50%	40%	52%
Disagree	47%	47%	50%	44%
Quality of a college education				
The quality of a college education is				
Generally improving	36%	44%	44%	36%
Staying about the same	37%	33%	37%	35%
Generally declining	17%	13%	16%	21%

Note: "Don't know" and "No opinion" responses are omitted. The telephone survey of 1,010 adults was conducted in December 1986. The statistical margin of error at the 95-per-cent confidence level is plus or minus 3 percentage points.

SOURCE: OPINION RESEARCH CORPORATION

In Brief: The States

Oklahoma Governor Seeks Chancellor's Suspension

Oklahoma's new Governor, keeping a campaign promise, is seeking the suspension of the state's chancellor for higher education until questions are resolved about whether he received improper consulting fees, said an aide to Gov. Henry Bellmon.

Joe A. Leone, chancellor of the Oklahoma State Board of Regents for Higher Education, worked as a consultant for state-controlled Oscar Rose Junior College after he left that college's presidency to join the Board of Regents staff. He said he had billed both the state and the college on certain business trips—a practice that has been questioned—because he did work for both.

Mr. Leone, who has since received a vote of confidence from the regents, said he expected to be cleared of any wrongdoing and had no plans to step down. At his request, state officials are investigating his past consulting practices.

Questions concerning Mr. Leone's consulting attracted attention after a state audit of Oscar Rose revealed that $440,000 in college funds had allegedly been misappropriated. Two former college officials were charged with embezzlement in connection with the alleged fraud, and authorities are looking into the college's financial past, including the years when Mr. Leone was president.

In the meantime, said Sam Armstrong, Mr. Bellmon's press secretary, the allegations are "serious enough that a man who deals with $400-million in state funds annually should remove himself from the daily activities until this is cleared up."

Cal. Governor Orders Cuts in University Budgets

California's Gov. George Deukmejian, a Republican, has ordered the University of California and California State University systems to cut their budgets for the current fiscal year by slightly more than 1 per cent.

Governor Deukmejian ordered 2-per-cent cuts for most state agencies because recent estimates of state revenue for the year show a decline of $450-million over the estimates available when the budget was adopted.

He originally ordered the universities to make cuts of that magnitude—which would have totaled $34.2-million for the University of California system and $27.5-million for the California State system—but agreed to smaller reductions after university officials told him they would need to increase student fees to cut their budgets by 2 per cent.

THANK YOU!

The GRE Board and the Council of Graduate Schools in the United States would like to thank the following institutions that attended the 1986 **GRE/CGS Forums on Graduate Education:**

Alfred Adler Institute of Chicago
American Graduate School of International Management
American University
Appalachian State University
Assumption College
Atlanta University
Augusta College
Bank Street College
Baruch College
Boston College
Boston University
Boston University, College of Communication
Boston University, College of Engineering, Arts and Sciences
Bowling Green State University
Brown University
Bryn Mawr College
California Lutheran University
California Polytechnic State University, San Luis Obispo
California School of Professional Psychology
Carnegie Mellon University
Central Connecticut State University
Central Washington University
Chapman College
Chicago State University
City University of New York
Claremont Graduate School
Clemson University
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University of North Carolina at Chapel Hill
University of Notre Dame
University of Oklahoma Health Sciences Center
University of Oregon
University of Rochester
University of San Diego
University of South Carolina
University of Southern California
University of Tennessee, Knoxville
University of Toronto
University of Virginia
University of Washington
University of Wisconsin, Milwaukee
University of Wyoming
Utah State University
Villanova University
Virginia Commonwealth University
Virginia Polytechnic Institute and State University
Wang Institute
Washington State University
West Chester University
Western Carolina University
Western Illinois University
Worcester Polytechnic Institute
Yale University

Specific dates and locations for the 1987 GRE/CGS Forums will be announced in the early spring. Inquiries pertaining to institutional participation should be addressed to:

GRE/CGS Forums on Graduate Education, 29P
Educational Testing Service
Princeton, New Jersey 08541-6000

Note Book

To ease a campus housing crunch, Western Oregon State College has purchased 19 mobile homes left behind by the Bhagwan Shree Rajneesh, the Indian cult leader whose central Oregon commune broke up last year after he was forced to leave the United States.

The college, which projects a 17-per-cent enrollment increase for the spring semester, paid $373,000 for the fully outfitted homes, said Judy Niesslein, a college spokesman.

Western Oregon, located about 200 miles west of Rajneeshpuram, as the cult's headquarters was called, saved almost $600,000 by buying the housing secondhand, she said.

The money will help pay off the defunct commune's debt.

Each unit, which houses 14 students, has seven bedrooms, a living room, study area, two baths, a shower, and a laundry, Ms. Niesslein said.

The units will be placed in the verdant groves of the college's arboretum.

•

Stanford University students and staff members have put together a board game to help students learn about sex and personal relationships.

"Sexploration" forces students to take roles and discuss such topics as contraception, drugs and alcohol, pregnancy, abortion, sexually transmitted diseases, and relationships.

The game's creators say many students don't understand the complex issues surrounding sex and relationships, or find it difficult to talk about them. For instance, a group of freshmen who played the game were unaware of what the word "fornication" meant.

The game's makers say they avoided creating a game that assumed players were sexually active; rather, they wanted students to clarify their values so they know how to act when placed in a sexual situation. The "values underlying the game are being thoughtful about your own decisions, taking personal responsibility for your behavior, and communicating openly with a partner," says Alice Supton of Stanford's residential-education program.

•

Students living off their campuses in Boston may find themselves spending a night or longer in the clink if they turn their stereo amplifiers up too high.

Boston last month enacted a law allowing police to press criminal charges against anyone who creates excessive noise between 11 p.m. and 7 a.m. The law allows police to enter a home without a warrant if the noise level exceeds 50 decibels.

Sentences range as high as six months in jail and $200 in fines.

The bill was aimed largely at the more than 10,000 Boston College and Boston University students who live in the residential neighborhood of Allston-Brighton, according to Boston City Councilor Thomas Menino.

Students

86 Pct. of Students Attend College in Home States, U.S. Study Finds

Texas, North Carolina have largest proportion of resident students, District of Columbia the lowest

WASHINGTON

About 86 per cent of all college students attend institutions in their home states, the U.S. Department of Education reports.

The states with the largest proportions of resident college students are Texas and North Carolina, each with 94 per cent, while the District of Columbia enrolls the smallest, 53 per cent.

Net Gains in Enrollment

Most students who remain in their home states attend public colleges and universities, while those who move out of state are about evenly divided between public and private institutions, the department's report said.

Taking into account both the numbers of students who leave a state for college and the number who arrive, the District of Columbia, Massachusetts, and North Carolina have the largest net gains in enrollment,

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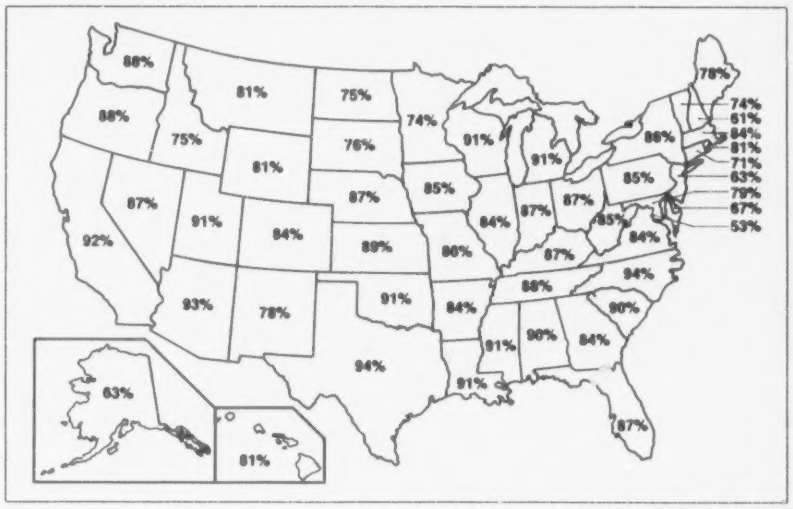

CHRONICLE MAP BY JOJO GRAGASIN, JR.

Map shows the proportion of college students enrolled at campuses in their home states.

Franklin and Marshall Career Center Sets Up Receptions in 5 Cities to Promote 'Networking'

WASHINGTON

The trip Paul Tarricone and his two roommates from Franklin and Marshall College planned for their winter vacation took them not to ski slopes nor beaches nor outrageous parties. In fact, the nearest they came to a mountain was Capitol Hill; the only sand they saw was several blocks away, in corridor ashtrays at Loews L'Enfant Plaza Hotel. And the party they went there to attend was a Monday-night cocktail reception full of lawyers, with a banker or two and a handful of Congressional staffers thrown in for good measure.

If a Washington cocktail reception seems an unlikely holiday destination for three college seniors, consider that their original itinerary included similar receptions in Philadelphia on Tuesday and in New York on Wednesday; they skipped Boston on Thursday because they didn't know anyone there to spend the night with. But some of their classmates attended all four receptions, plus a fifth in the college's hometown of Lancaster, Pa.

The five receptions, which brought Franklin and Marshall students together with alumni who might be able to help them find jobs, were organized by the college's career center. The receptions were scheduled in a way that allowed students—encouraged by career-center staff members—to attend more than one.

Jobs Through Connections

"Back in September or October," says Mr. Tarricone, "we had a meeting with the career-center people, and they said one of the best ways to find jobs was through connections—alumni, family, friends. They told us it was time to think about networking."

The opportunity for "networking" was what brought Mr. Tarricone and his roommates, Larry Cohen and Michael Hynes, to Washington. Mr. Tarricone, an English major who is sports editor of the Franklin and Marshall *College Reporter*, is looking for a job in journalism. Mr. Cohen, also an English major, hopes to find work in public relations; Mr. Hynes, a political-science major, is thinking about marketing.

"The receptions were intended primarily as icebreakers, as ways to let students start developing the social skills necessary to approach people and make contacts," says Roger A. Godin, the college's director of career services.

"The alumni are really interested in helping students, and would sign for our career network," he says, "but then nobody called them. The students were hesi-

Continued on Following Page

College Enrollment Up 1 Pct., U.S. Finds

College enrollment is up 1 per cent this academic year, according to the U.S. Department of Education. A slight decline that the department predicted last fall did not materialize, it said, because of increases in the numbers of both traditional and older students.

The following table shows how enrollment has changed this year:

	Fall 1986 enrollment	1-year change
All 4-year institutions	7,754,000	—
Men	3,805,000	—
Women	3,949,000	+1%
All 2-year institutions	4,644,000	—
Men	2,035,000	—
Women	2,609,000	+3%
All institutions	12,398,000	+1%
Public	9,600,000	+1%
Private	2,797,000	—
Undergraduate	10,724,000	+1%
Graduate	1,674,000	+1%
Men	5,840,000	—
Women	6,558,000	+2%

— Not statistically different from zero.

SOURCE: U.S. DEPARTMENT OF EDUCATION

A Degree in 4 Years Is No Longer the Rule

WASHINGTON

According to tradition, Johnny leaves college with sheepskin in hand four years after his high-school graduation.

That may no longer be true, according to a federal study of 4,400 students who were part of the high-school class of 1972.

Fewer than half the students in the study received their college degrees in the traditional four years after they left high school, the Department of Education survey found.

Almost one in four took more than five years to receive a degree, the study found. One in ten took more than seven years.

The report of the study did not say whether those figures were on the rise, but several college administrators said they had seen an increase in the number of students taking more than four years to finish college.

David Marsh, an assistant vice-president at the Ohio State University, said the number of Ohio State students who finish in four years had dropped from 30 per cent to 25 per cent in the last decade. He attrib-

Continued on Following Page

'Campus Compact' Project Stresses Public Service

Continued from Page 1

day's generation is in part the fault of educators who have not placed enough emphasis on public-service values.

"No one has been out saying to them, 'Look, this is important—there are things you can do for this country,' " says Mr. Newman.

The most important thing Campus Compact can do, he says, is help create a national atmosphere that supports the group's call for service.

Daily, from an office at Brown University, Campus Compact's staff of six provides college students and officials with assistance in starting service programs nationwide. It is also building up a clearinghouse of public-service information.

The college presidents' plans include:

► Examining means of tying more service components to the curriculum.

► A push for television programs and newspaper and magazine articles featuring student volunteers.

► Looking at ways of linking financial aid to public service.

► Encouraging college public-relations officers to alert newspapers nationwide to the civic activities of students from their towns.

► Selecting four students every year, beginning this March, to receive $1,500 each to facilitate their doing public-service work. Nominations will be accepted from every member.

► A push by the Rev. Theodore M. Hesburgh, president of the University of Notre Dame, for federal funds for a program modeled after the Reserve Officer Training Corps, in which the government would pay for students' college education in return for four years of service in the Peace Corps. The corps has approved the idea.

$1.5-Million Appropriated

The group claims some responsibility for creating the climate that allowed for certain changes in the Higher Education Act of 1965 last fall.

Its leaders pushed for and won an amendment requiring that, in cases of students working in community-service programs, the federal government contribute a greater share of College Work-Study money. In addition, $1.5-million for community-service projects was appropriated to the Fund for the Improvement of Postsecondary Education.

"The compact has leadership on it," says Charles B. Reed, chancellor of the State University System of Florida, mentioning Mr. Hesburgh, Mr. Kennedy, and John DiBiaggio, president of Michigan State University. "Folks like that make a difference."

Several of the group's members believe it is crucial that institutions begin building service elements into the curriculum, either by requiring volunteer work in some classes or by teaching about social action and civic-mindedness. In addition to showing that public service is central to the mission of higher education, doing this would help students apply their coursework to life beyond college.

Mr. Kennedy suggests that faculty members make better use of case material in their teaching and invite "people who are actually players in the policy arena" to lecture, exposing students to real-life decision making.

Before this can be done, he says, "faculties have to be persuaded that there's some really solid intellectual substance there. Otherwise they won't think it's serving an academic purpose as well as it serves a social purpose."

Adult-Literacy Efforts

Paul A. Elsner, chancellor of the Maricopa County Community College District in Arizona, says a volunteer-service requirement, which he is considering, would be especially educational for older woman students who feel out of touch with the work world outside the home.

One of the group's main campaigns is to involve greater numbers of students in adult-literacy efforts, for which it received a $130,000 grant from an anonymous donor and hired a staff person.

At Brown, the Center for Public Service got in touch with local community groups to determine the kind of literacy help they needed from student volunteers and is planning to train students interested in becoming tutors, according to Susan Stroud, director of both the center and Campus Compact.

She calls the latter's literacy campaign "a good match between an important national need and student resources."

So as not to repeat the work of others unnecessarily, Campus Compact will work with various service groups, such as the Campus Outreach Opportunity League (COOL), a group run mostly by recent graduates, and Youth Service America, another independent group.

"We're working toward the same ends," says Ms. Stroud. "We need to be working at it from a number of different angles."

Campus Compact gave COOL $6,000 to help with a resource book the group was writing, in return for a couple of hundred copies.

Says Robert Hackett, COOL's outreach director, "We've really hit the students. We sleep on their couches and go to their parties.

"Campus Compact has taken the top-down approach."

Before Campus Compact was started, he says, campus officials didn't believe college students could be motivated for public service. "Everybody said, 'You're crazy; college kids don't care.' "

Echoing the sentiments of many members, Sister Janice E. Ryan, president of Trinity College in Vermont, says, "What it has done is enable me, who has a great deal of interest in community and public service and in leadership, to be with a group of presidents who were singularly focusing on this topic.

"That was catalytic to my own energy."

Says Mr. Hackett, "I think that having 100 presidents talking about this is helping. They have the potential to do very big things."

86 Pct. of Students Attend College in Home States, U.S. Study Finds

Continued from Preceding Page

while New Jersey and Illinois have the largest net losses, the report said.

The figures cover 3.4 million first-time students who took college courses for credit in the fall of 1984 and include only U.S. citizens.

The results are based on reports from 2,883 institutions, or 87 per cent of those surveyed. Because not all colleges responded to the survey, some state figures may be underestimated, the report noted.

Copies of the 11-page report, "Residence and Migration of College Students, Fall 1984," are available free from the U.S. Department of Education, Office of Educational Research and Improvement, Education Information Branch, 555 New Jersey Avenue, N.W., Washington 20208-1325. For information about purchasing a computer tape of the data, contact the department's Information Systems and Media Services Office at the same address.

Net Migration of Students by State, 1984

	Number of first-time students	Percentage from out of state	Number of state residents who left	Number of students from out of state	Net migration
Alabama	54,722	16%	4,775	8,569	+ 3,794
Alaska	4,986	9%	2,660	424	− 2,236
Arizona	78,792	16%	4,674	12,625	+ 7,951
Arkansas	25,501	13%	4,244	3,391	− 853
California	319,119	6%	24,384	20,326	− 4,058
Colorado	51,912	17%	8,210	8,842	+ 632
Connecticut	52,390	15%	18,016	8,054	− 9,962
Delaware	10,581	40%	3,050	4,214	+ 1,164
D. C.	22,502	71%	3,301	15,934	+ 12,633
Florida	134,295	13%	16,647	16,963	+ 316
Georgia	59,562	20%	8,614	11,772	+ 3,158
Hawaii	15,611	12%	2,867	1,833	− 1,034
Idaho	13,185	28%	3,007	3,633	+ 626
Illinois	170,594	7%	29,233	12,243	− 16,990
Indiana	71,558	18%	8,248	13,178	+ 4,930
Iowa	49,397	18%	6,871	8,929	+ 2,058
Kansas	46,836	15%	4,670	6,976	+ 2,306
Kentucky	43,246	16%	5,304	7,005	+ 1,701
Louisiana	52,081	13%	4,486	6,585	+ 2,099
Maine	16,223	17%	3,630	2,697	− 933
Maryland	76,484	14%	16,998	10,842	− 6,156
Massachusetts	135,906	22%	18,589	30,125	+ 11,536
Michigan	135,015	7%	12,857	8,897	− 3,960
Minnesota	42,251	19%	11,591	8,003	− 3,588
Mississippi	40,603	10%	3,499	4,123	+ 624
Missouri	68,647	18%	9,246	12,186	+ 2,940
Montana	11,613	13%	2,326	1,493	− 833
Nebraska	29,150	13%	3,690	3,786	+ 96
Nevada	15,749	6%	2,257	914	− 1,343
New Hampshire	13,371	39%	4,932	5,183	+ 251
New Jersey	79,318	6%	42,336	4,398	− 37,938
New Mexico	17,662	20%	3,896	3,529	− 367
New York	309,688	10%	42,574	32,416	− 10,158
North Carolina	113,631	14%	5,986	16,293	+ 10,307
North Dakota	9,514	31%	2,110	2,912	+ 802
Ohio	130,008	11%	16,690	14,262	− 2,428
Oklahoma	53,855	9%	4,430	4,715	+ 285
Oregon	47,734	13%	5,219	6,126	+ 907
Pennsylvania	168,753	17%	24,055	28,383	+ 4,328
Rhode Island	26,500	34%	4,082	9,084	+ 5,002
South Carolina	46,788	13%	4,430	5,923	+ 1,493
South Dakota	10,067	26%	2,244	2,571	+ 327
Tennessee	61,345	18%	6,560	10,781	+ 4,221
Texas	205,129	9%	10,976	18,566	+ 7,590
Utah	32,110	20%	2,315	6,456	+ 4,141
Vermont	11,016	40%	2,286	4,358	+ 2,072
Virginia	91,209	18%	14,452	15,999	+ 1,547
Washington	67,429	8%	7,791	5,683	− 2,108
West Virginia	21,943	21%	3,009	4,506	+ 1,497
Wisconsin	95,535	11%	8,155	10,118	+ 1,963
Wyoming	7,994	15%	1,551	1,199	− 352
Total	**3,469,110**	**13%**	**468,023**	**468,023**	**0**

SOURCE: U.S. DEPARTMENT OF EDUCATION

Franklin and Marshall Career Center Sponsors 'Networking' Receptions

Continued from Preceding Page

tant about intruding on the time of professional adults."

Mr. Godin says the receptions, which were added to the career-services calendar this year, "put students in an atmosphere they're more comfortable with, because they can go with friends. When they realize the alumni are warm and friendly, the students will be more willing to call."

Easy and Inexpensive

The receptions were easy to organize and inexpensive to hold, Mr. Godin says, and they were designed to involve as many people as possible. Students were given lists of alumni who planned to attend, and could seek out those they wanted to talk to by scanning name tags in the room.

The program was such a success this year, Mr. Godin says, that he hopes to expand it to other cities. Almost 250 alumni signed up to participate, he says. He adds that about 200 students signed up to attend at least one of the receptions, with roughly 70 per cent of those attending at least two and 30 per cent attending three. Between 10 and 20 students attended all five, he says.

Mr. Tarricone and his roommates, however, gave up after two. Mr. Hynes found plenty of alumni with whom to discuss marketing jobs, especially in Philadelphia, but Mr. Tarricone and Mr. Cohen discovered that the college has comparatively few alumni working in journalism or public relations—and even fewer actually appeared at the first two receptions. So they scratched their plan to go on to New York.

But, Mr. Tarricone says, he copied down some names and addresses from the New York alumni list. His next tactic, he says, will be to blanket the Washington-to-Boston corridor with résumés and clips. And the résumés, he warns a Washington reporter, are "ready to roll."

—LAWRENCE BIEMILLER

A Degree in 4 Years Is No Longer the Rule

Continued from Preceding Page

uted the decline to a decrease in financial aid and an increase in the number of students who hold jobs.

Conney M. Kimbo, vice-president for student affairs at the University of Pittsburgh, said rising tuition costs had forced students, especially at large urban universities, to spread out their college education. "We find more students dropping in and dropping out," he said.

The Department of Education study found that women were more likely than men to finish their education in four years—56 per cent to 43 per cent. Better students are also more likely to finish college sooner: 56 per cent of the high-school students who scored in the top quarter on a Department of Education aptitude test in high school finished in four years.

Only one quarter of those who finished in the bottom quarter in the aptitude test completed their college education in the traditional time.

The study also found that only one-third of the study's bachelor's-degree recipients had graduated from the college where they matriculated.

Class of 1972 Studied

The survey, conducted by the Center for Education Statistics, is the latest report stemming from a continuing study of the high-school class of 1972.

Single copies of the report, *Completion Time for Bachelors Degrees*, are available free from the U.S. Department of Education, Education Information Branch, 555 New Jersey Avenue, NW, Washington 20208, (800) 424-1616.

—MICHAEL W. HIRSCHORN

Colorado Ends Loans to 'Disenrolled' Students

BOULDER, COLO.

The University of Colorado at Boulder has moved to prevent student leaders from lending money from a student-fee account to 235 persons who were "disenrolled" for not paying tuition and fees on time.

The leaders announced the plan in advertisements in campus newspapers. They said they would lend up to $400 to students who were having trouble paying tuition increases, and that the money would be drawn from an account containing $13,000 that is used to aid financially strapped students.

The university's vice-chancellor for academic services, Kaye Howe, immediately froze the account, saying that the students' plan was an irresponsible use of financial aid. She said tuition increases this year had resulted in only a very small increase in the number of disenrollments, and that the money should be used to aid truly needy students.

2/10/87 C2175-1

THE CHRONICLE
of Higher Education.

February 11, 1987 • $1.95
Volume XXXIII, Number 22

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News Summary

Articles on inside pages

Two universities and a Texas billionaire will provide the capital for the development of a powerful new microcomputer for higher education. Story on Page 2.

Research on acid rain has been moved forward by successful attempts to pinpoint the source of pollutants. Story on Page 6.

High-energy physicists face a major obstacle in selling the $4-billion Super Conducting Supercollider to the public. Story on Page 7.

Potential college trustees are increasingly declining to serve on boards without directors' and officers' liability insurance. Story on Page 15.

An archbishop's threat to invoke a new provision of Catholic law has unnerved officials of Catholic colleges. Story on Page 15.

Small-business leaders [illegible] campaigning for new restrictions on the business activities of non-profit organizations. Story on Page 21.

State spending on financial aid for needy undergraduates is expected to rise 13 per cent this year, according to a national survey. Story on Page 21.

The football program at Southern Methodist University could have the N.C.A.A.'s "death penalty" invoked against it. Story on Page 35.

The only service that provides microform copies of unpublished research from the United States to South Africa has been suspended. Story on Page 38.

A student strike kept the campus of Mexico's National Autonomous University closed last week. Story on Page 39.

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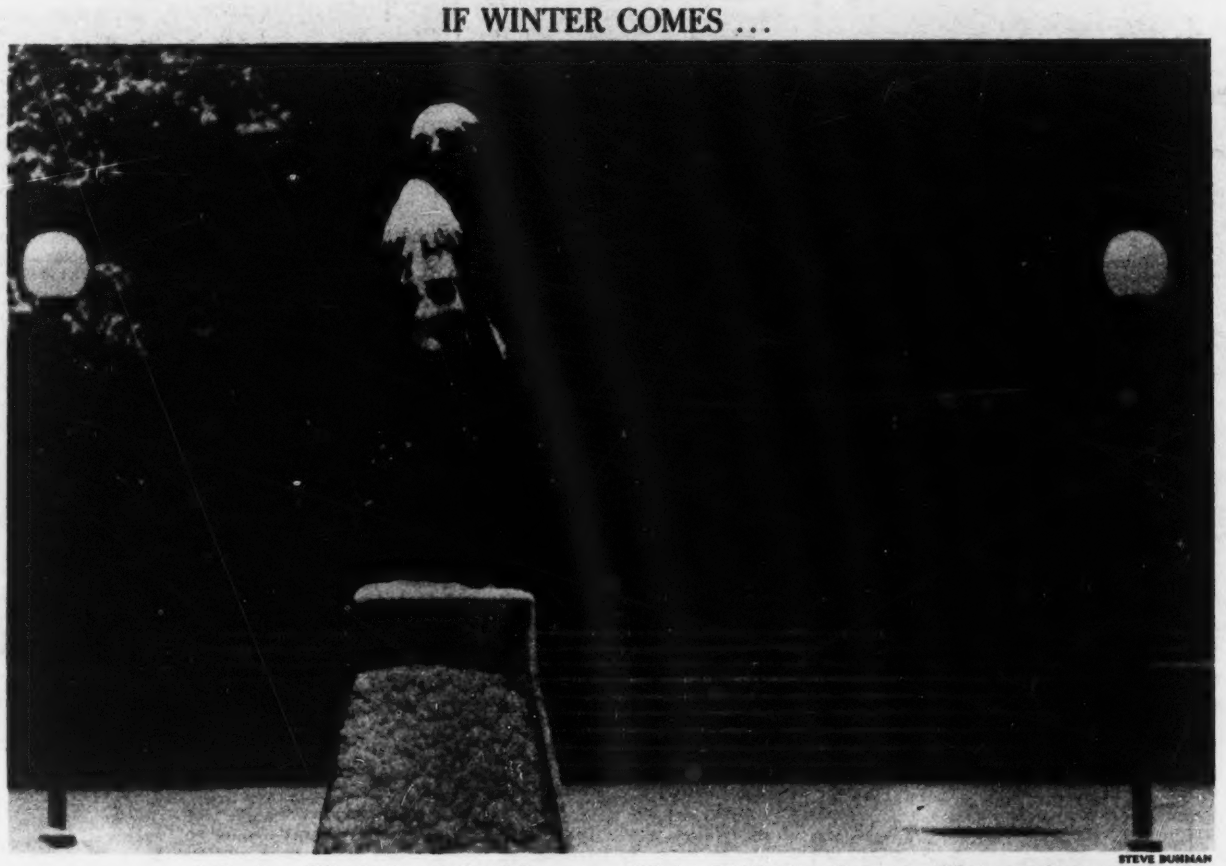
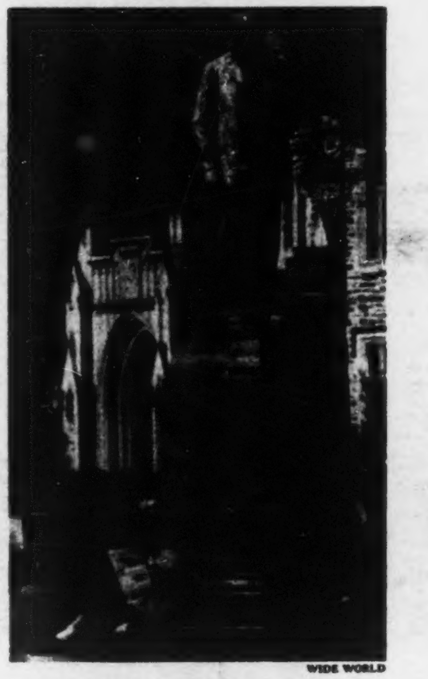
IF WINTER COMES . . .



STEVE DUNHAM

At Southern Illinois U. at Carbondale, a statue of Delyte W. Morris, a former president, weathers a snowstorm.
At Duke U., a statue of benefactor James B. Duke and a reader of the student paper are bathed in springlike sunshine.



WIDE WORLD

Reform of Teacher Education Said to Require Professional Status and Cooperative Efforts

By JEAN EVANGELAUF

WASHINGTON

Unless schoolteachers are respected as professionals, the drive to improve education in America will stall, according to educators speaking here at the first national meeting of the Holmes Group.

"Real reform must address the everyday, pedestrian realities of the learning workplace," Mary Hatwood Futrell, president of the National Education Association, told the group, an organization of research universities dedicated to reforming the education of teachers.

"Effective schools are schools in which teachers have the latitude and the authority to determine curricular content, craft discipline codes, define schoolwide objectives and goals, and help design standards of teacher certification that insure the integrity of our profession."

Albert Shanker, president of the American Federation of Teachers (A.F.L.-C.I.O.), criticized the public schools for their "business as usual" approach. Placing better-trained teachers into schools as they now exist will not lead to great gains in student performance, he said. He warned that a "tremendous backlash" in public

Continued on Page 20, Column 1

Colleges Could Play Crucial Role in Halting Spread of AIDS Epidemic, Public-Health Officials Say

By LAWRENCE BIEMILLER

BERKELEY, CAL.

Public-health specialists say colleges and universities could play a crucial role in halting the epidemic spread of AIDS by educating all their students—heterosexuals as well as male homosexuals and intravenous-drug users—about the disease and how to avoid becoming infected with the virus that causes it.

"Education is the only defense we have," said Mervyn Silverman, director of the American Foundation for AIDS Research, at a conference here on AIDS and the college campus. "We could stop the spread of the virus,tomorrow if people listened to us."

Added Dr. Silverman, a former director of the San Francisco Department of Public Health: "There have got to be very heavy education campaigns aimed at students and faculty members. We have got to get the word out."

The number of AIDS cases among people in the traditional undergraduate age group is still small, said Richard P. Keeling, chairman of the American College Health

Continued on Page 32, Column 1

Stanford U. Seeks to Raise $1.1-Billion in 5 Years

Stanford University this week is launching U.S. higher education's largest fund-raising campaign ever: a five-year drive for $1.1-billion. It surpasses New York University's goal of raising $1-billion through the year 2000. Story on Page 28.

Ways & Means

When is the departure of the No. 2 official at a federal agency considered a gain rather than a loss by his colleagues? When the official takes a job at the White House, as Under Secretary of Education Gary L. Bauer will this week.

The President has appointed Mr. Bauer to be his chief domestic-policy adviser.

Mr. Bauer's move to the White House is expected to boost Education Secretary William J. Bennett's influence there. The two have a close relationship, and Mr. Bauer says he expects that he and Mr. Bennett will continue pursuing their common interests "in a number of areas."

▪

Mr. Bennett has been working hard lately to be involved in White House decisions on domestic-policy issues. One Administration official said the White House put out "feelers" to see if Mr. Bennett wanted to take the domestic-policy position himself. But Mr. Bennett declined, and recommended Mr. Bauer, perhaps because he felt he could have more influence—and stay in the national limelight—as head of the Education Department.

▪

The top contenders for Mr. Bauer's job are said to be Bruce M. Carnes, Deputy Under Secretary; Chester E. Finn, Jr., Assistant Secretary for Research; and Wendell L. Willkie, II, the department's general counsel.

Sources say Mr. Bennett is also considering asking the President to nominate someone outside the government who has had a high profile in the field of education.

▪

After more than a year, the vacant position of Assistant Secretary of Education for civil rights may soon be filled.

LeGree S. Daniels, the deputy Secretary of State in Pennsylvania, is said to be the top candidate for the job. She was not available for comment last week, but her assistant said Ms. Daniels was under consideration for the post.

Ms. Daniels, a former chairman of the National Black Republican Council, was appointed to her present position in November by outgoing Republican Gov. Dick Thornburgh.

Leaders of Pennsylvania higher-education and civil-rights groups said last week that they were not familiar with Ms. Daniels's background.

Speaking on behalf of the Republican Council, Ms. Daniels told the 1985 annual meeting of the National Association for Equal Opportunity in Higher Education that blacks on the campuses should be more open to relationships with businesses. She said she believed that "the full integration of the black-student population and the black colleges and universities into the nation's economic mainstream can occur through the corporate-academic partnership."

Government & Politics

Small-Business Leaders Launch Campaign to Curb Campus Sales of Consumer Goods

Aim is to persuade lawmakers that colleges abuse non-profit status by competing with merchants

By SCOTT JASCHIK

Buying a best seller in the campus bookstore or a new computer from a college dealer may become more expensive—or impossible—if some members of Congress and state legislators have their way.

In Washington and the state capitals, small-business leaders have persuaded many lawmakers that non-profit organizations—particularly colleges and universities—have used their tax-exempt status and government support to gain an unfair advantage over privately owned businesses.

In recent months these small-business leaders and their political allies have planned an ambitious campaign to impose new restrictions on the business activities of non-profit organizations.

Under attack are a wide range of operations, including the sale of computers and clothing, as well as services ranging from chemical analyses to catering.

College and university leaders view the movement with increasing concern—both because of the inconveniences it could cause for their students and faculty members, and because of the potential loss of millions of dollars in revenue. They also say that small-business owners have significantly exaggerated the extent of the problem.

Government Agencies Act

The business owners' activity has prompted action from many government agencies. For example:

► In August the White House Conference on Small Business called for changes in federal and state laws to prohibit non-profit organizations from engaging in "unfair competition."

► Officials of the U.S. Small Business Administration have called for changes in the federal tax code that would require non-profit organizations to prove that their money-making operations are related to their missions and cannot be obtained from private sources. Otherwise, non-profit groups would have to pay corporate income taxes on the revenue earned from certain activities.

► The General Accounting Office, at the request of Congress's Joint Committee on Taxation, will release a report on the issue this month. It is expected to document the growing demands by business leaders for changes, but also to state that there is insufficient information to study the issue adequately.

► The House Ways and Means Committee's Subcommittee on Oversight will hold hearings next month on the effectiveness of current tax law regarding non-profit organizations.

► State legislators will introduce bills on the subject in more than a dozen states this year. Some proposed legisation would forbid colleges and universities to run certain profit-making operations; others would impose new taxes and reporting regulations on such institutions.

Government concern about the business activities of universities and other non-profit groups is welcome and long overdue, says Joseph O'Neil, chairman of the Business Coalition for Fair Competition, a group of more than 20 small-business trade associations.

"The proper role of a university is to educate and conduct basic research," he says. "Today we have rampant duplication and competition with tax-paying businesses in areas that have nothing to do with education and basic research."

To higher-education officials, however, the movement by small businesses is viewed as a serious threat to legitimate activities that colleges perform.

Says Sheldon E. Steinbach, general counsel of the American Council on Edu-

Continued on Following Page

State Aid for Needy Undergraduates Expected to Rise 13 Pct. this Year

WASHINGTON

State spending on grants and scholarships for needy undergraduates is expected to rise 13 per cent this year, the largest rate of increase in a decade, a national survey has found.

Most of this year's growth is expected to be concentrated in about half the states, however. And more states plan to decrease their spending than did so last year, while fewer plan an increase.

Aid not based on need, though still less that one-tenth of the total, is growing faster than need-based aid, showing a 21-per-cent rise.

The survey was conducted by the National Association of State Scholarship and Grant Programs. It found that states expected to award a total of $1.39-billion to 1.35 million needy undergraduates in academic 1986-87. Last year, $1.23-billion was awarded to 1.3 million undergraduates.

The average undergraduate who receives state aid is expected to get $1,034, compared to $947 last year.

11 See Decreases

This year 26 states expect to increase their student-aid budgets, while 11 expect decreases. Last year 34 states increased spending and only 4 decreased it, according to the report.

The Reagan Administration has consistently recommended deep cuts in federal spending on education and has maintained states and private sources would make up

Continued on Page 24, Column 1

'He Started It, Mr. Chairman': Bennett Eschews Politesse on Capitol Hill

By ROBIN WILSON

WASHINGTON

If Education Secretary William J. Bennett doesn't change his style of dealing with members of Congress, he may find himself in hot water, some Capitol Hill observers are saying.

Last week Mr. Bennett faced a second round of attacks in Congress for his proposals to cut deeply into spending on higher education. Just last month Mr. Bennett was harshly criticized by both Republicans and Democrats in the Senate (*The Chronicle*, January 21).

One Democratic Representative called last week's tussles "gut wrenching." The arguments between Mr. Bennett and members of Congress occasionally became highly personal—an unusual occurrence in public sessions on Capitol Hill, where members, in deference to Congressional tradition, generally remain quite polite even when making the most stinging criticisms.

A spokesman for Mr. Bennett said the Secretary was only responding in kind to the attacks of lawmakers.

▪

One of the more heated exchanges last week took place at a hearing of the House Budget Committee—the panel in charge of setting general priorities for federal spending:

"What is the reform objective of zeroing out money for libraries?" asked Rep. James L. Oberstar, Democrat of Minnesota, noting that the federal government spends more money on recruiting for the volunteer Army and on military marching bands than it spends on library aid.

"There is no reform objective," Mr. Bennett retorted. "But there is a budget deficit in Washington, Congressman."

"I don't want your rhetoric. I want answers," said Mr. Oberstar, his voice rising.

Mr. Bennett said he believed there was a difference between spending on education and spending on defense—military support must be provided by the federal government, while spending on education, including libraries, could be picked up by individual states, he said.

"What does your state provide for defense?" he asked Mr. Oberstar in making his point.

"I'm asking the questions here and you give the answers," Mr. Oberstar shouted. "It's a matter of values. I disagree with yours."

"Fine," Mr. Bennett responded. "All

Continued on Page 25, Column 1

State Aid for Needy Students Is Expected to Rise 13 Pct.

Continued from Page 21

the difference. For fiscal 1988, the Administration has asked Congress to reduce spending on student aid by 45 per cent, to $4.5-billion.

Jerry S. Davis, director of research and policy analysis for the Pennsylvania Higher Education Assistance Agency, which prepared the report, said the states could not make up for such a reduction.

"States and local governments will take up a lot of slack for reductions in elementary and secondary programs, but there's certainly no evidence they're going to do it in financial aid with postsecondary students," he said.

Tight Budgets in Some States

In general, states with large numbers of students are increasing their spending on aid, while those with fewer students are decreasing their commitments, said Mr. Davis.

He said reasons for the decreases varied from state to state. Over all, he said, tight budgets caused by the decline in the agricultural, oil, and other industries, have forced many states to place less priority on student aid and more on other programs that address larger concerns.

The report says that 10 states expect to award about $50-million each this year, or 75 per cent of the grant aid distributed by states nationwide. They are California, Illinois, Massachusetts, Michigan, Minnesota, New Jersey, New York, Ohio, Pennsylvania, and Texas.

Ten states and the District of Columbia expect to award less than $2-million each this year. The states are Delaware, Idaho, Montana, Nebraska, Nevada, New Hampshire, New Mexico, North Dakota, South Dakota, and Wyoming.

Money for Graduate Students

State assistance to needy graduate students is expected to rise this year by 12.7 per cent, to $27.4-million. Only 22 states aid graduate students.

While 91 per cent of state aid for undergraduates goes to needy students, spending on programs that award aid without consideration of need is expected to increase 21 per cent—to $144.1-million. Twenty-seven states have such programs, ranging from merit scholarships to programs for certain types of students, such as veterans, orphans, and health professionals.

Alabama, Florida, Georgia, North Carolina, Ohio, and Virginia have programs aimed at narrowing slightly the gap between the cost of public colleges and the cost of private colleges. Students who attend private colleges in the states in which they live are given small lump-sum payments, regardless of their financial need.

About 56 per cent of the money distributed this year to needy undergraduates is expected to go to students attending private colleges and universities in the state that awarded the aid. About 42.5 per cent is expected to go to students attending public institutions in the state that awarded the money, and 1.5 per cent will be provided to students at out-of-state institutions.

The survey found several shifts in the characteristics of undergraduate student-aid recipients. Less aid is expected to go to black, Hispanic, and Asian students, and to those who attend college part time.

For example, states reported distributing grants and scholarships to more than 91,000 black undergraduate students in 1981-82, whereas this year states expect to award aid to only 59,000 black students. That is a drop of about 35 per cent.

New Programs Planned

The percentage of state aid awarded to part-time students had been on the upswing but is expected to drop from 4.6 per cent to 3.9 per cent, the survey found. The report, however, says the statistics do not represent a "significant reversal" in the trend toward distributing more aid to part-time students.

Some states plan to put new student-aid programs into effect this year or next. Several plan to begin distributing merit scholarships based solely on academic achievement and ability. Connecticut, Maryland, New Jersey, Ohio, and Pennsylvania hope to establish grant programs for single parents or part-time students. And the District of Columbia, Maryland, Oregon, South Carolina, and Utah would like to establish work-study programs.

Florida reported that it would establish a small fund, called the Challenger Astronauts Memorial Scholarship Program, for students who intend to pursue a liberal-arts education or get a degree in teacher education.

—ROBIN WILSON

FACT-FILE

Estimated State Student Aid, 1986-87

Undergraduate

	Need-based assistance			Non-need-based assistance		
	Dollars paid out	Number of awards	Average award	Dollars paid out	Number of awards	Average award
Alabama	$ 2,163,000	2,845	$ 760	$ 4,241,000	8,297	$ 511
Alaska	241,000[1]	161[1]	1,497[1]	—	—	—
Arizona	2,376,000	3,456	688	—	—	—
Arkansas	5,145,000	12,925	398	558,000	279	2,000
California	131,146,000	68,801	1,906	—	—	—
Colorado	9,470,000	13,700	691	7,861,000	11,506	683
Connecticut	12,028,000	11,949	1,007	—	—	—
Delaware	765,000	1,224	625	203,000	202	1,005
D.C.	1,059,000	830[1]	1,276	—	—	—
Florida	15,311,000	16,019	931	19,366,000	18,731	1,034
Georgia	4,734,000	14,300	331	12,049,000	13,840	871
Hawaii	597,000	1,800[1]	332	—	—	—
Idaho	487,000	794[1]	613	123,000	82	1,500
Illinois	132,862,000	103,800	1,280	10,217,000	22,859	447
Indiana	40,492,000	39,783	1,018	410,000	820	500
Iowa	22,498,000	14,928	1,507	900,000	3,703	243
Kansas	5,430,000	5,350	1,015	—	—	—
Kentucky	11,583,000	17,572	659	—	—	—
Louisiana	1,447,000	1,073	1,349	758,000	6,051	125
Maine	1,161,000	3,770	308	—	—	—
Maryland	7,214,000	11,933	605	1,560,000	1,919	813
Massachusetts	57,072,000	58,220	980	1,960,000	1,646	1,191
Michigan	66,943,000	42,236	1,585	1,072,000	1,100[1]	975
Minnesota	59,706,000	66,000	905	—	—	—
Mississippi	1,230,000	1,950	631	545,000	193[1]	1,806[1]
Missouri	10,081,000	8,400	1,200	—	—	—
Montana	401,000	980	409	—	—	—
Nebraska	1,093,000	2,500	437	—	—	—
Nevada[2]	414,000[1]	828[1]	500[1]	—	—	—
New Hampshire	656,000	1,514	433	125,000	186	672
New Jersey	65,711,000	61,100	1,075	1,967,000	2,472	796
New Mexico	1,461,000[1]	1,700[1]	712[1]	—	—	—
New York	417,526,000	328,270	1,272	25,101,000	65,990	380
North Carolina	4,397,000	6,480	679	20,929,000	24,000	872
North Dakota	748,000	1,625	460	—	—	—
Ohio	48,500,000	75,000	647	18,739,000	25,736	728
Oklahoma	9,450,000	15,492	610	165,000	184[1]	897
Oregon	9,224,000	14,707	627	—	—	—
Pennsylvania	103,426,000	115,043	899	720,000	321	2,243
Rhode Island	8,412,000	10,500	801	—	—	—
South Carolina	16,415,000	7,850	2,091	—	—	—
South Dakota	563,000	1,400	402	57,000	61	934
Tennessee	13,735,000	22,403	613	52,000	13	4,000
Texas	20,293,000	19,497	1,041	—	—	—
Utah	1,641,000	1,825	899	572,000	330	1,733
Vermont	8,106,000	10,255	790	—	—	—
Virginia	4,350,000	5,600	777	13,777,000	12,412	1,110
Washington	10,491,000	14,004	749	28,000	166	1,474
West Virginia	5,203,000	6,500	800	—	—	—
Wisconsin	30,908,000	47,365	645	—	—	—
Wyoming	204,000[1]	279[1]	731[1]	—	—	—
Puerto Rico	12,248,000	56,630	216	—	—	—
Total	**$1,398,819,000**	**1,353,166**	**$1,034**	**$144,056,000**	**223,099**	**$ 646**

Graduate and Professional

	Need-based assistance			Non-need-based assistance		
	Dollars paid out	Number of awards	Average award	Dollars paid out	Number of awards	Average award
Alabama	$ 48,000	13	$3,692	$ 20,000	47	$ 426
Alaska	—	—	—	1,834,000[1]	n/a	n/a
Arizona	99,000	144	688	—	—	—
California	3,479,000	1,030	3,378	—	—	—
Colorado	834,000	725	1,150	1,096,000	675	1,624
Connecticut	—	—	—	200,000	20	10,000
Delaware	85,000	136	625	28,000	7	4,000
Florida	3,000	1	3,000	662,000	1,467	451
Indiana	—	—	—	150,000	150	1,000
Louisiana	—	—	—	89,000	77	1,156
Maryland	941,000	2,374	396	141,000	81	1,741
Massachusetts	3,470,000	2,601	1,334	—	—	—
Michigan	3,351,000	1,064	3,149	—	—	—
Mississippi	—	—	—	280,000	138[1]	1,304[1]
New Hampshire	1,000	1	1,000	—	—	—
New Jersey	683,000	238	2,870	600,000	100	6,000
New York	10,424,000	13,400	778	4,500,000	1,297	3,470
North Carolina	1,218,000	769	1,584	—	—	—
Ohio	—	—	—	108,000	105	1,029
Oklahoma	895,000	2,035	440	287,000	87	3,299
Texas	1,711,000	1,428	1,198	—	—	—
Utah	—	—	—	792,000	66	12,000
Vermont	150,000	120	1,250	—	—	—
Virginia	—	—	—	1,006,000	924	1,089
Wyoming	36,000[1]	21[1]	1,714[1]	—	—	—
Total	**$27,428,000**	**26,100**	**$1,051**	**$11,793,000**	**5,241**	**$2,250**

n/a Not available.

[1] Indicates 1985-86 data.

[2] Data could not be broken down into graduate versus undergraduate categories, and are included in undergraduate totals.

Note: This table shows most of the money that states spend on student aid. However, some states may spend more through programs that are not specifically identified as student-aid programs. Totals include 1985-86 appropriations where 1986-87 figures are not available.

SOURCE: NATIONAL ASSOCIATION OF STATE SCHOLARSHIP AND GRANT PROGRAMS

U. of Washington Pacifies Critics of Business Activity

Continued from Preceding Page

state regulation because of the actions of other universities.

In Pullman, business leaders have been criticizing the sale of computers and other items by Washington State University for several years.

Legislators held hearings on the situation last year and plan to introduce a bill this year that would restrict the sales operations of colleges and universities—possibly covering items allowed for sale by the University of Washington's regulations.

Lawrence A. Cenotto, director of the Small Business Council of the Association of Washington Businesses, says, "We have to push for a law. The universities' idea of enforcement is to enforce it themselves, and that's not enforcement."

Aid for Legislative Position

Mr. Christ of the Seattle Chamber of Commerce disagrees. He says his group is willing to accept the university's plan for now and would support legislation only if the policy fails.

And Mr. Olswang thinks the university's position with legislators will be strengthened by the new policy.

"It's important that we studied this issue and did something about it before a bill was moving through the Legislature," he says. "If we were just starting the process now, I think we would look defensive."

Although the university will lose some revenue under the policy—how much isn't certain—he says the gains in community support and legislative credibility are far more valuable.

"Good will," he says, "is more important than a few dollars."

—SCOTT JASCHIK

2/19/87 C2175-1

THE CHRONICLE
of Higher Education.

ISSN [illegible]

February 18, 1987 • $1.95
Volume XXXIII, Number 23

News Summary

Articles on inside pages

Rules for dealing with allegations of scientific fraud have been proposed by the National Science Foundation. Story on Page 7.

Oklahoma would close some colleges and merge others under a restructuring proposed by Gov. Henry Bellmon. Story on Page 19.

The case of a Northwestern University professor accused of disrupting an appearance by an anti-Sandinista Nicaraguan has raised concerns over free speech and charges of a political witch-hunt. Story on Page 13.

A tiny footnote in last year's Tax Reform Act is creating big problems for college and university fund raisers. Story on page 26.

Stanford University, which has announced the largest fund drive in the history of higher education, says it will need every penny of its $1.1-billion goal. Story on Page 23.

New strategies for "enrollment management" are helping many colleges attract and retain more students. Story on Page 27.

Scholarship cuts approved by the National Collegiate Athletic Association have angered many basketball coaches. Story on Page 31.

Athletic directors from several major conferences are getting involved in the movement to reform intercollegiate athletics. Story on Page 31.

A threatened strike by professors in Britain has apparently been averted by a salary offer that would give them an immediate, 16-per-cent increase. Story on Page 35.

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Big-Ticket Science Research Is Pinching U.S. Projects, Harming Smaller Efforts

By KIM McDONALD

Giant experimental devices and sophisticated research instruments that seek to push back the frontiers of science are becoming so expensive that they may squeeze federal research budgets and threaten to destroy many smaller research efforts, some scientists fear.

In astronomy, particle physics, and other "big science" disciplines, the trend toward larger and more sophisticated research tools to probe smaller or more distant regions has radically altered the way research in those fields is conducted.

Fifty years ago, major discoveries in particle physics could be made by individual researchers using relatively inexpensive instruments. Now, major projects may require large teams of researchers working on devices that cost hundreds of millions, even billions, of dollars.

"The problem is symptomatic of a number of fields," said John E. Pike, associate director for the Federation of American Scientists. "All of the easy questions have been answered."

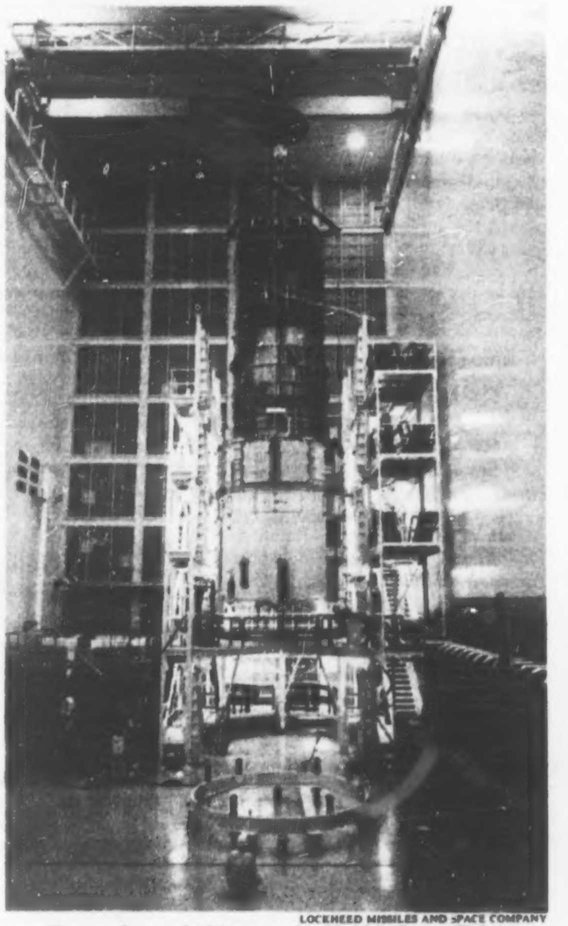
Deciding Where to Draw the Line

As demands for the big-ticket items rise, so too do the pressures on scientists to confront the difficult task of deciding where to draw the line.

At what point, they are being asked by lawmakers and other scientists, does the cost of a big-science facility outweigh any future gains in knowledge that a large number of less costly projects can produce?

Should big-science fields and their expenditures be allowed

Continued on Page 6, Column 4



LOCKHEED MISSILES AND SPACE COMPANY

To pay for such things as the Hubble Space Telescope (above), scientists have had to cut smaller enterprises.

Bad News for Public Colleges: Economies Slump in Many States

By CAROLYN J. MOONEY

The state of many states is not promising for higher education this year.

The nation's governors, continuing a tone set when they proclaimed 1986 as the year to focus on education, were enthusiastic about the role of colleges and universities in transforming state economies in their recent state-of-the-state and budget messages. But many states won't have the money available to do much about it, and when they do, they are likely to be more careful about spending it.

"I have submitted an extremely tight budget, the first in modern history that is lower than the preceding budget," North Dakota Gov. George A. Sinner told legislators in his state-of-the-state remarks. "The fact is—our falling revenues will not pay for needed services."

Higher-education systems in 20 states, including North Dakota, have already been forced to make budget cuts in the midst of the current fiscal year. Most of those states rely heavily on income from the financially strapped agricultural, oil, or energy-related industries.

Midyear budget cuts have hit colleges in 20 states. Story on Page 19.

In the 12-month period ending last June, for example, the total amount of taxes that states collected from oil, gas, coal, and other industries dropped by $700-million—from $7.1-billion to $6.4-billion—according to the Bureau of the Census. The losses were reflected in virtually all areas financed by state revenues, including higher education.

The fact that states have less money on hand now than they did six years ago is a significant measure of their overall finan-

Continued on Page 20, Column 1

New Tax Law Complicates Retirement Planning for College Employees

By KATHERINE S. MANGAN

WASHINGTON

Ruth and Otto Landman had planned carefully for their retirement and thought they had their finances squared away.

Over the years the two, both university professors, had tucked money into tax-deferred accounts to supplement the income they would receive from their separate pension plans.

But just as Mr. Landman was about to retire from his teaching position at Georgetown University here, Uncle Sam threw the couple a curve: a new tax law that will wipe out some of their tax shelters and complicate their savings strategy.

"We're a little uncertain what our income will be now," says Mrs. Landman, a professor of anthropology at the American University here. "There are so many unknowns, so it's quite difficult to sort out."

Faculty members and administrators across the country are voicing the same frustrations as they try to assess the impact of the new tax system on their retirement plans. Because the law does away with many of the exemptions that higher education has enjoyed in the past, it could make faculty retirement planning harder and more expensive, some experts say.

Under the old law, faculty pensions were quite flexible, allowing participants to shelter large amounts of money that could in some cases be withdrawn for nonretirement purposes.

The new tax law, however, limits the amount of money that employees can put into tax-favored retirement plans, and it

Continued on Page 14, Column 1

Ways & Means

Education Department officials are protesting a new White House proposal to lump student-aid dollars with other federal money for low-income people and allow states to distribute it as they see fit.

The White House says the plan, which is still on the drawing board, would simplify the administration of federal welfare programs. But Education Department officials say that giving the states more control over the money that now goes directly to students or colleges would actually make things more complicated.

Furthermore, the Education Department says, there would be no assurance that states would use student-aid money for educational purposes.

It was still unclear last week whether the White House would agree to eliminate education programs from the plan before sending it to Congress.

•

Efforts by Nevada higher-education officials to pass an estate-tax referendum last fall are paying off exactly as they had hoped: Gov. Richard H. Bryan has proposed splitting the estimated $10-million the state will collect in estate taxes over the next two years between higher education and public schools. And that dollar estimate was made before the death of Liberace, one of Nevada's wealthiest entertainers.

Mr. Bryan's proposal must be approved by the Legislature before it can take effect.

The University of Nevada helped mount a publicity campaign to persuade Nevada residents that they had nothing to lose by approving the referendum, which allows the state to collect a share of federal estate taxes. Until the referendum was approved, Nevada was the only state that didn't collect its share of such taxes.

Higher-education officials admit that the wealth of Nevada's many casino magnates added inspiration to their campaign. "What really got morbid," said Pamela E. Galloway, the system's public-information director, "was when we started thinking about people who haven't died yet."

•

Northern Illinois University officials have found a new way to get legislative support for their programs. They have started a "Legislator in Residence" program to honor selected lawmakers and provide them with a day of activities on campus.

The university selected perhaps the state's most powerful legislator—Speaker of the House Michael J. Madigan—to inaugurate the program. Mr. Madigan met with administrators, students, and faculty members during his day on the campus.

Ever anxious to demonstrate the political clout of higher education, university officials also arranged a meeting for Mr. Madigan with students from his home district.

Government & Politics

States' Midyear Budget Cuts Wreak Havoc on Campuses; Northeast Alone Is Spared

More than $500-million for higher education has been cut for 1986-87; many governors are upset

By SCOTT JASCHIK

Now you see it, now you don't.

That's the way the money situation has been for colleges and universities in 20 states this year. In those states, governors and other state officials have cut a total of more than $500-million from higher-education budgets for 1986-87 in the middle of the fiscal and academic year.

College officials say these midyear reductions—usually called "reversions" or "recisions" in budget jargon—are extremely debilitating.

"It raises havoc," says Carrol Krause, Montana's commissioner of higher education. "Emergency planning just doesn't make for good management, and you have to take money wherever you can find it."

Mr. Krause and his colleagues say the cuts are difficult to absorb because they typically come when half the year has already passed, and half the money for that year has been spent. Hence a 4-per-cent cut in total appropriations is actually an 8-per-cent cut for the second half of the year.

Finding items to cut is more difficult midway through the year because contracts may have already been signed for the full year, and course offerings may have already been announced.

"It becomes impossible to plan from one semester to the next," says Marvin L. Roubique, Louisiana's assistant commissioner of higher education for finance. "You never know what you're going to offer, what tuition you are going to charge, or how many students will pay that tuition."

The midyear cuts also upset governors. South Carolina's new chief executive, Republican Carroll A. Campbell, Jr., recently told his General Assembly to adopt a budget "which frees us from the shackles of midyear budget cuts." He added, "Those cuts disrupt the entire operation of state government. Our inability to discern good programs from bad forces blind cuts for everyone."

The number of states dealing with the problem has increased dramatically in the past few years. Last year 18 made midyear reductions; in 1985, only three states did.

Some states have been forced to reduce appropriations because of problems facing their most important industries—oil in Alaska, Louisiana, and Texas; agriculture in Kansas and Nebraska. Other states, such as Arizona, simply overestimated the amount of revenue they would take in.

New England and the Middle Atlantic States were the only regions not subjected to the cuts this year.

Acting When Revenues Decline

Regardless of economic problems, state leaders are forced to act when revenues decline. Unlike the federal government, virtually all state governments are prohibited from running a deficit.

In most states, governors have the power to order the across-the-board reductions needed to balance their budgets, but must call legislatures into special sessions if they want to eliminate the deficit through selective cuts, tax increases, or a combination of the two.

But the process varies widely. In Kentucky, for example, the governor can order cuts only up to 2.5 per cent. For larger reductions, the General Assembly must adopt a budget-cutting plan when it considers the appropriations bill. In South Carolina, decisions on cuts fall to the State Budget and Control Board, whose members are the Governor, state treasurer, state comptroller general, and the chairmen of the House Ways and Means Committee and Senate Finance Committee.

Tuition Hike Avoided in California

Sometimes the magnitude or type of cut can be changed by higher-education officials. In California this year, after Republican Gov. George Deukmejian announced a 2-per-cent budget reduction for state agencies, university officials said they would be able to offset the cut only with a rise in tuition, and a California law requires 10 months' notice for any such increase.

Governor Deukmejian allowed the universities to cut their state appropriations by only 1 per cent to avoid the rise.

One of North Dakota's midyear cuts came in the form of a delay for a scheduled salary increase for state employees. John A. Richardson, commissioner of higher education, received permission from state of-

Continued on Page 21, Column 3

Oklahoma's Governor Would Close Some Colleges, Merge Others to Cope with Decline in Oil Revenue

OKLAHOMA CITY

Oklahoma's Gov. Henry Bellmon has proposed a dramatic restructuring of public higher education here, including closing some colleges, merging others, and establishing new governing boards for most of the remaining institutions.

Governor Bellmon, a Republican who took office last month, said the changes were necessary because the state's oil revenue had declined drastically in the past year. Citing the need for a smaller, more efficient state government, he proposed similarly sweeping plans for many other agencies.

For higher education, Governor Bellmon's proposals included:

- ► Closing the University of Science and Arts of Oklahoma, the Oklahoma College of Osteopathic Medicine and Surgery, and the University of Oklahoma's College of Dentistry.
- ► Merging Tulsa Junior College and the University Center at Tulsa; Oklahoma City Community College, the Oklahoma State University Technical Branch in Oklahoma City, and Rose State College; and Sayre Junior College and Western Oklahoma State College.
- ► The creation of four governing boards for the state: for the University of Oklahoma, Oklahoma State University, four-year colleges and universities, and two-year institutions. At present, the state has 16 governing boards: one for the University of Oklahoma; one for Oklahoma State, three for four-year colleges, and two for two-year colleges; one for six regional colleges and universities; and one for each of two four-year institutions and 11 two-year institutions.

Critics Vow to Fight

The Governor said those steps would save money and improve the quality of education by enabling Oklahoma to focus its limited funds on the programs most important to the state.

Most officials at the colleges slated to be closed or merged have criticized the plan, or at least the parts of it involving their institutions.

While critics vowed to fight the proposals, aides to the Governor predicted that much of the plan would be adopted by the legislature. "Those who see themselves harmed may be against it," said Smith L. Holt, the Governor's Secretary of Education, "but those who look at the system as a whole are for it."

He also noted that many of the Republican Governor's proposals had been recommended late last month by a committee appointed by the outgoing Democratic Governor, George Nigh, and legislative leaders.

The political outlook for the plan is uncertain. State leaders trying to close colleges generally face difficult fights, as local legislators and alumni rally around their institutions.

But even college officials acknowledge that the state lacks the funds to maintain all its current operations.

With many other popular state programs—such as veterans' affairs and parks and recreation—under consideration for reductions this year, they say it is unlikely that higher education will avoid major cuts.

'It Doesn't Make Sense'

Nonetheless, some college leaders have started a drive to persuade legislators to reject the plan.

John H. Feaver, assistant to the president at the University of Science and Arts in Oklahoma, said he had been "shocked and surprised" to learn of the Governor's

Continued on Page 21, Column 1

Seek Tax Increases to Help Higher Education

"I think it goes back to the conservative nature of the state," agrees Clyde R. Ingle, Indiana Commissioner for Higher Education. "It's that people just haven't decided that higher education is that important yet."

Utah. This heavily Mormon, solidly conservative state faces problems caused by an unusually high birth rate and depressed energy and mining industries. Enrollment in public schools is growing rapidly—a net increase of nearly 12,000 is expected this year—and the boom will soon reach the state's colleges and universities. At the same time, economic problems have forced higher education and other state agencies to make midyear budget cuts.

In a state-of-the-state address that borrowed from Winston Churchill and also took a while to build up to the part about taxes, Gov. Norman H. Bangerter proposed a combination of new and higher taxes to raise $206-million for public schools and higher education. It would, in effect, restore the amount that was cut last year to this year's budget, and also give the system a small increase.

As in Indiana, the Governor's tax proposals—the biggest tax increase ever sought in Utah—have been unpopular with many legislators. In the meantime, however, a coalition that was formed last year to develop grassroots support for education is conducting a frenzied lobbying blitz.

The group, called the ALERT Foundation, was formed to promote Governor Bangerter's long-term education plan, which he calls his Agenda for Leadership in Educational Resources for Tomorrow. The University of Utah's President Chase N. Peterson and other college leaders have appeared on radio and television to support the Governor's tax package, and the foundation is soliciting university alumni for donations and sponsoring advertisements.

"The Governor is very courageous, considering he didn't have any special insight or relationship with higher education," Mr. Peterson says. He adds that he is optimistic that legislators will pass some kind of tax package.

Washington. Like Governor Orr of Indiana, Gov. Booth Gardner has proposed dropping the state sales tax by a half-cent but extending it to include consumer and professional services. Such a tax would raise an estimated $522-million for the 1987-89 biennium, with nearly $200-million going to higher education.

The Governor's higher-education proposals are aimed primarily at diversifying Washington's economy. The percentage of state money spent on higher education has fallen in recent years, and past attempts to create a state income tax have failed.

Since he proposed the tax last fall, Governor Gardner and his aides have traveled across the state lobbying for support, attracting plenty of media attention and inspiring political cartoonists. Jokes Rep. Dan Grimm, chairman of Washington's House Ways and Means Committee: "He never has to open car doors anymore. A university president will do it for him."

Other state employees were furious that the Governor's budget would give them only a 3-per-cent raise, while giving faculty members much more.

But according to Mr. Grimm and others, this appears to be higher education's year in Washington. While the Governor's whole package may not pass, the higher-education portion is gaining support, Mr. Grimm says. The reason lies, as it often does these days, in economic development.

"The Governor has wisely abandoned the smokestack-chasing approach, making offers to bring in Saturn [auto-manufacturing] plants," Mr. Grimm says. "That was the Clint Eastwood approach to economic development—go out and shoot 'em. But now he's taking a long-term approach, and education is part of it."

•

In the coming weeks, legislators in Indiana, Utah, Washington, and elsewhere will have to decide whether or not they agree with Mr. Grimm's assessment. But if legislators decide to take the long-term approach and raise taxes, higher education will also have to show more foresight, warns Mr. Sinks of Indiana.

In recent years, Indiana institutions have been asked to report regularly on performance goals set in advance, a practice Mr. Sinks thinks should continue.

"Before, nobody knew what they did with the money," he says. "Higher education doesn't tell us enough, and they don't tell the public enough."

INDIANAPOLIS NEWS

Indiana's Gov. Robert D. Orr: His plan to raise faculty salaries and increase student aid is tied to higher taxes.

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ty chairs, and $1-million to start a work-study program for students.

Other governors' proposals:

► In Hawaii, Gov. John D. Waihee, III, wants to give the University of Hawaii system $20-million to improve selected academic programs, provided that the system reallocates $10-million to those programs.

► In Minnesota, Gov. Rudy Perpich wants to give the University of Minnesota system an 18.1-per-cent increase over the next biennium, using money from a newly proposed tax package. But his plan also would reduce spending for state scholarships.

► In Nevada, Gov. Richard H. Bryan proposed spending $195,000 to establish 180 scholarships over the next four years. They would be used to encourage top high-school graduates to enter the teaching profession.

► In South Carolina, Gov. Carroll A. Campbell, Jr., proposed eliminating remedial courses at four-year institutions, using the savings to finance a research program linking the state's three major universities.

► In South Dakota, Gov. George S. Mickelson is seeking a 1-cent sales-tax hike to finance an economic-development program. He wants the state to use surplus tax money from the unemployment fund to finance a new $4.7-million research program for state universities and give faculty members and other state employees a 3-per-cent raise.

Okla. Governor Seeks Closings, Mergers

Continued from Page 19

recommendation. "Our undergraduate liberal-arts programs are unique in the state and consistent with the programs being called for in the national reports," he added. "It doesn't make sense to close us."

W. Roger Webb, president of Northeastern State University, said he opposed the plan to eliminate the governing boards for individual colleges, while maintaining individual boards for the two large universities.

"The plan seems to be looking at the best interests of two of the institutions at the expense of the rest," he said.

'Not Enough Leadership'

Governor Bellmon also called on the State Board of Regents for Higher Education, the statewide coordinating board, to do a better job of defining institutional and system missions and eliminating duplication.

His aide Mr. Holt said, "We think there has not been enough leadership there."

The regents have not responded to the Governor's proposals or comments, but relations between the board and Mr. Bellmon were tense even before he was elected.

In October he called on Joe A. Leone, the board's chancellor, to take a leave of absence while the State Attorney General investigated allegations that Mr. Leone had improperly received state funds from Rose State College after leaving that institution's presidency. Mr. Leone denied any wrongdoing and has not left his position.

Said Mr. Holt: "The Governor thinks he should step aside. There is still a serious question of ethics involved."

Legislative hearings on the Governor's proposals are expected to start later this month. —SCOTT JASCHIK

Midyear Budget Cuts Wreak Havoc on Campuses

Continued from Page 19

ficials to cut funds in other areas so faculty members could receive their salary increase on schedule.

Community colleges in some states benefit from their status as local, rather than state, agencies. State funds for their operations are delivered to local governments, which then distribute the money to the colleges. Once the funds are disbursed, the state can't take them back. For that reason, community colleges in California and Texas were spared the budget cuts that four-year colleges and universities faced this year.

Another type of cut occurs when a governor tells state agencies that their next budget will contain major reductions, and advises them to "voluntarily" cut from their current budget so that funds saved can be used to following year.

That was the case this year in Oklahoma and Utah, although Utah's colleges also suffered an involuntary cut and the Oklahoma Legislature is expected to approve a 3-per-cent mandatory cut proposed by Republican Gov. Henry Bellmon.

No Surprise in Arkansas

Although budget cuts in most states come as a major disappointment to higher-education officials, in Arkansas reductions are almost always expected. In that state, legislators approve budget items in three categories for each agency. Two categories are for improvements and "wish-list items," says Paul Marion, director of higher education, and legislators in recent years have approved them realizing that the funds would probably not be available.

"It's normal to get those things cut," he says, adding though that this year, Democratic Gov. Bill Clinton was also forced to cut items in the first category, which generally includes financing only to continue current programs.

Looking to next year, Mr. Marion says he will give more credence to the state of the economy than to the budget adopted by the legislators.

"Unless you really know what's going to happen in the economy—and we don't—the budget is only going to be a ballpark figure," he says.

Midyear Cuts in State Appropriations for Higher Education

Alabama	Cut $26-million	5 per cent
Alaska	Cut $14-million	10 per cent
Arkansas	Cut $55-million	17.5 per cent
Arizona	Cut $32.6-million	7 per cent
California	Cut $37-million	1 per cent
Colorado	Cut $5-million	2 per cent
Kansas	Cut $13.3-million	3.8 per cent
Kentucky	Cut $11.8-million	2.4 per cent
Louisiana	Cut $41-million*†	8.8 per cent
Minnesota	Cut $37.6-million‡	2.5 per cent
Montana	Cut $10-million*	12 per cent
Nebraska	Cut $2.1-million	1 per cent
New Mexico	Cut $4.5-million	2 per cent
North Dakota	Cut $4.2-million†‡	5.5 per cent
South Carolina	Cut $11.9-million	2.6 per cent
South Dakota	Cut $850,000	1 per cent
Texas	Cut $199-million	10.5 per cent
Utah	Cut $10.3-million	4 per cent
Wisconsin	Cut $32-million	5.8 per cent
Wyoming	Cut $19.5-million†‡	8.2 per cent

Note: Percentages represent cuts in total higher-education appropriations. The ways in which states divide the reductions among their higher-education institutions vary widely. In several states, tuition increases have partially offset reductions in appropriations, so overall budget reductions are lower.

* Cumulative total for two midyear cuts.

† Additional cuts may be announced this month.

‡ Figures are for biennial budgets.

Colleges Challenge Bennett's Views on Dropouts

By ROBIN WILSON

WASHINGTON

Education Secretary William J. Bennett has again infuriated college officials by questioning the quality of their curricula.

The controversy centers on Mr. Bennett's allegation that students are not finishing college as quickly as they used to because their studies are not compelling.

But college representatives say students are taking longer to complete their college programs for other reasons, including financial pressure to drop out and work instead of staying on the campuses. They say many students who drop out eventually return and earn their degrees.

"Almost half the students who enter four-year programs do not complete those four-year programs. We think that's a problem," Mr. Bennett told a House Appropriations subcommittee recently.

"What kind of movie are we running if so many of the people are getting up and walking out before it's over?" the Secretary asked members of the House Budget Committee at another hearing.

Bruce M. Carnes, Deputy Under Secretary of Education, said the department's statistics showed that 51 per cent of the students who started bachelor's degree programs in academic 1957-58 earned their degrees in four years. Only 38 per cent of the students who started such programs in 1981-82, he said, graduated in four years.

"People used to go to college and stay there because they got something worth having," he said. "It's obviously not that way now."

More Students Are Older

College officials say that just because students drop out doesn't mean they don't enroll again and eventually graduate. The American Council on Education says 74 per cent of the students who attend college finish within six years of when they began.

College officials say there are many reasons why fewer students are finishing college in four years, none of which has to do with the quality of education being provided.

First, they say, more and more students are older and attending college part time. Those students could not possibly finish in four years, the officials say. According to the A.C.E., 5.7 million of the 12.4 million students now enrolled in college, or 46 per cent, are attending part time.

Second, college officials say many students must drop out of college to work and earn money for tuition.

Mr. Carnes, however, said 45 per cent of students already received federal aid and the growth in student aid had roughly kept pace with the growth in college costs.

"I don't think the solution is just more money for people to stay there," Mr. Carnes said. "There are the means available for them to stay in school. They are making a value judgment not to."

Others disagreed. "Students may be getting more out of their education by taking time out for periods of employment," said Lawrence E. Gladieux of the Washington office of the College Board. "That may give them a more solid set of goals. They'll know what they want to get out of an education."

FACT–FILE

U.S. Funds for Colleges and Universities

The top 100 institutions in total federal obligations for fiscal 1985

	Research and development[1]		Total federal obligations[1]	
	Amount	Rank	Amount	Rank
Johns Hopkins U.[2]	$429,180,000	1	$448,068,000	1
Massachusetts Institute of Technology	187,649,000[3]	2	211,480,000	2
Stanford U.	174,961,000[3]	3	203,707,000	3
U. of Washington	146,179,000	4	183,352,000	4
Howard U[4]	13,769,000	110	163,879,000	5
Columbia U., Main Division	127,331,000	6	155,971,000	6
Cornell U.	119,966,000[3]	8	155,831,000	7
U. of California, Los Angeles	128,211,000	5	151,180,000	8
U. of Wisconsin, Madison	124,604,000	7	148,703,000	9
U. of Minnesota	103,272,000	14	142,497,000	10
Yale U.	109,227,000	10	133,756,000	11
U. of Michigan	108,035,000	11	133,679,000	12
Harvard U.	109,414,000	9	131,790,000	13
U. of California, Berkeley	106,710,000[3]	12	129,841,000	14
U. of Pennsylvania	103,119,000	15	126,523,000	15
U. of California, San Diego	103,603,000	13	117,937,000	16
U. of California, San Francisco	98,536,000	16	114,634,000	17
Pennsylvania State U.[5]	76,723,000	19	111,279,000	18
U. of Southern California	89,646,000	17	102,542,000	19
U. of Illinois, Urbana-Champaign	83,122,000	18	99,423,000	20
U. of Colorado	71,424,000	23	90,793,000	21
New York U.	74,577,000	20	89,244,000	22
Ohio State U.	56,065,000	30	87,154,000	23
U. of Chicago	71,194,000[3]	24	83,957,000	24
Washington U.	71,978,000	22	82,607,000	25
Duke U.	69,169,000	26	81,712,000	26
U. of Rochester	70,379,000	25	81,073,000	27
U. of Texas, Austin	72,379,000	21	78,729,000	28
U. of Pittsburgh	58,620,000	28	76,163,000	29
Purdue U.	51,475,000	34	75,298,000	30
Northwestern U.	46,747,000	39	75,285,000	31
U. of North Carolina, Chapel Hill	63,105,000	27	73,431,000	32
Michigan State U.	46,945,000	42	72,795,000	33
U. of Florida	47,656,000	41	72,675,000	34
U. of Iowa	55,117,000	31	70,326,000	35
U. of Arizona	49,740,000	37	67,080,000	36
Indiana U.	39,660,000	48	65,013,000	37
U. of Maryland, College Park	51,013,000	35	64,646,000	38
Yeshiva U.	56,988,000	29	64,623,000	39
U. of Utah	50,938,000	36	63,837,000	40
Texas A&M U.	39,041,000	49	62,003,000	41
Gallaudet U.[4]	2,173,000	207	61,173,000	42
Georgia Institute of Technology	51,585,000	33	59,606,000	43
Boston U.	46,152,000	43	59,387,000	44
U. of Alabama, Birmingham	44,093,000	45	59,373,000	45
California Institute of Technology	55,083,000[3]	32	58,499,000	46
Inter American U. of Puerto Rico, San German	$ 0	—	$57,591,000	47
Case Western Reserve U.	47,994,000	40	56,465,000	48
Carnegie Mellon U.	48,872,000[3]	38	54,052,000	49
U. of California, Davis	43,156,000	46	52,247,000	50
Louisiana State U.	34,764,000	54	51,155,000	51
Baylor C. of Medicine	45,837,000	44	49,670,000	52
U. of Miami	33,709,000	58	47,726,000	53
U. of Kentucky	21,931,000	83	47,300,000	54
Vanderbilt U.	39,909,000	47	47,096,000	55
U. of Virginia	37,416,000	51	46,858,000	56
Oregon State U.	33,746,000	57	46,154,000	57
North Carolina State U.	27,357,000	68	45,515,000	58
Rutgers U.	26,689,000	70	45,442,000	59
U. of New Mexico	31,362,000	62	44,189,000	60
U. of Georgia	23,800,000	76	44,092,000	61
U. of Texas Health Science Center, Dallas	37,432,000	50	43,495,000	62
U. of Puerto Rico, Regional Colleges Administration	0	—	43,014,000	63
U. of Connecticut	32,775,000	59	42,941,000	64
U. of Illinois, Chicago	28,172,000	65	42,395,000	65
U. of Massachusetts, Amherst	25,780,000	72	41,249,000	66
U. of Cincinnati	27,886,000	67	41,117,000	67
Princeton U.	34,720,000[3]	55	41,091,000	68
New Mexico State U.	24,861,000	73	40,883,000	69
U. of Tennessee, Knoxville	23,226,000	79	39,665,000	70
U. of Kansas	20,676,000	86	39,505,000	71
U. of Hawaii, Manoa	29,090,000	63	39,084,000	72
State U. of New York, Stony Brook	35,059,000	53	39,068,000	73
U. of California, Irvine	31,515,000	60	38,927,000	74
Tufts U.	34,495,000	56	38,036,000	75
Virginia Polytechnic Institute & State U.	24,565,000	75	37,878,000	76
Rockefeller U.	35,285,000	52	37,745,000	77
Virginia Commonwealth U.	28,896,000	64	37,706,000	78
Colorado State U.	24,767,000	74	37,331,000	79
Rochester Inst. of Technology	1,356,000	230	36,582,000	80
U. of Missouri, Columbia	22,343,000	81	36,552,000	81
State U. of New York, Albany	11,530,000	117	34,446,000	82
Iowa State U.	14,555,000[3]	106	34,276,000	83
Woods Hole Oceanographic Institute	31,392,000	61	33,814,000	84
Temple U.	18,954,000	92	33,564,000	85
Emory U.	27,005,000	69	33,161,000	86
Utah State U.	22,067,000	82	32,415,000	87
Brown U.	26,029,000	71	31,178,000	88
City U. of New York, Mount Sinai School of Medicine	28,059,000	66	31,054,000	89
Oklahoma State U.	10,666,000	124	30,829,000	90
U. of California, Santa Barbara	23,602,000	78	30,145,000	91
U. of Oregon, Main Campus	17,445,000	94	29,843,000	92
Washington State U.	17,361,000	95	29,614,000	93
Puerto Rico Jr. C.	0	—	29,341,000	94
Mississippi State U.	14,459,000	107	29,186,000	95
Georgetown U.	18,194,000	93	27,929,000	96
State U. of New York, Buffalo	23,051,000	80	27,842,000	97
Wayne State U.	16,598,000	100	27,282,000	98
Syracuse U.	17,035,000	97	26,803,000	99
Kansas State U.	9,871,000	129	26,539,000	100
Total, 100 institutions	**$5,326,087,000**		**$7,151,433,000**	
Total, all institutions	**$6,379,151,000**		**$10,984,597,000**	

Note: Federal obligations are funds set aside for payment. Institutions do not always receive them during the year in which they were obligated.

[1] Amounts shown represent total obligations from 15 federal agencies that accounted for about 95 per cent of all federal obligations to universities and colleges in the United States and for virtually all federal obligations to such institutions for research and development. Amounts shown represent awards to individual institutions. Awards to the administrative offices of university systems are excluded from institutional totals because final allocation of funds is unknown, but are included in "Total, all institutions."

[2] Includes $299-million obligated to the Applied Physics Laboratory, considered a federally financed research-and-development center until fiscal 1978.

[3] Excludes research and development obligations to university-administered federally financed research-and-development centers.

[4] Howard U. and Gallaudet U. receive substantial appropriations from Congress each year for general operating expenses.

[5] Includes $8-million obligated to the Applied Research Laboratory, considered a federally funded research-and-development center until fiscal 1978.

SOURCE: NATIONAL SCIENCE FOUNDATION

In Federal Agencies

Broadcast licensing. The Federal Communications Commission has issued a final rule, effective March 12, relaxing the license-posting requirements for experimental broadcast stations and for Instructional Television Fixed Services (*Federal Register*, February 6, Pages 3,805-6).

Exchange programs. The United States Information Agency has announced changes in the Exchange Visitor Skills List, including one to reflect the indefinite suspension of Libya from the list (*Federal Register*, February 5, Pages 3,744-5).

Data collection. The following agencies have submitted lists of their data-collection requests to the Office of Management and Budget for review: Department of Health and Human Services (*Federal Register*, February 6, Page 3,864); Housing and Urban Development Department (*Federal Register*, February 6, Pages 3,868-9); National Aeronautics and Space Administration (*Federal Register*, February 9, Pages 4,046-8); Education Department (*Federal Register*, February 11, Page 4,379-81).

Health education. The Public Health Service has announced the quarterly interest rates for Health Education Assistance Loans made after March 31, 1987 (*Federal Register*, February 11, Page 4,388).

Nuclear waste. The Nuclear Regulatory Commission has published its final ruling on the information the Department of Energy will need to determine the effects radionuclide sorption has on the ability of high-level nuclear-waste repositories to meet certain federal standards (*Federal Register*, February 6, Pages 3,893-4).

Records disposal. The National Archives and Records Administration has published a list of federal agency requests to dispose of records or shorten the period during which the records will be kept (Federal Register, February 6, Pages 3,892-3).

Research misconduct. The National Science Foundation has proposed regulations to establish what actions should be taken if misconduct or fraud occurs in research that is supported by the foundation. Comments must be received by April 13 (*Federal Register*, February 10, Pages 4,158-61).

Unemployment insurance. The Employment and Training Administration has ruled that federal unemployment-insurance laws do not apply to employees of educational institutions during breaks, as long as the employees have a "reasonable assurance" they will be able to return to the institution *Federal Register*, February 6, Pages 3,889-90).

Congressional Hearings

WASHINGTON

The following Congressional hearings of interest to educators and scientists are scheduled for the coming weeks.

Since changes frequently occur with little advance notice, it is advisable to check with committees on or near the hearing dates.

SENATE

Education. April 22. Hearings on the fiscal 1988 budget of the Department of Education. Contact: Senate Subcommittee on Appropriations for Labor, Health and Human Services, Education, and Related Agencies; (202) 224-7225.

Education. April 23. Hearings on appropriations for elementary, secondary, and postsecondary education. Contact: Senate Subcommittee on Appropriations for Labor, Health and Human Services, Education and Related Agencies; (202) 224-7225.

HOUSE

Campus facilities. February 26. Hearings on the fiscal 1988 budget for higher-education facilities programs and College Housing Loans. Contact: House Subcommittee on Appropriations for Labor, Health and Human Services, and Education; (202) 225-3508.

National Endowment for The Arts. March 26. Hearings on the fiscal 1988 budget for the endowment. Contact: House Subcommittee on Appropriations for the Interior; (202) 225-3081.

Washington People

Frank H. T. Rhodes, president of Cornell University, has been nominated by President Reagan to be a member of the National Science Board.

Lawrence E. Shulman, former director of the division of arthritis, musculoskeletal, and skin diseases at the National Institutes of Health, has been appointed director of the new National Institute of Arthritis and Musculoskeletal and Skin Diseases.

Leo Walsh, dean of agriculture and life sciences at the University of Wisconsin at Madison, has been appointed by President Reagan to be a member of the Board for International Food and Agriculture Development.

Colleges Turn to 'Enrollment Management' to Lure More Students

Continued from Preceding Page

to really engage in a period of very intensive soul-searching."

Those involved in enrollment management have to ask a lot of questions about their institution: What is our mission? What are our strengths? Our weaknesses? How can we best market ourselves? How can we distinguish ourselves from our competitors? What kinds of students do we want to attract? What types will do best in this environment? How can we most effectively deliver an education?

What works, most experts agree, is a holistic approach that upgrades all aspects of the university—not just admissions—and helps to keep students as well as to get them. Often that can be a complex and time-consuming process that involves making substantial changes in marketing, restructuring the administration, changing the curriculum, and adding student services.

Scholarships from the Sky

Ideally, according to experts in the area, it involves regularly scheduled meetings among faculty members and those in charge of admissions, financial aid, registration, advising, career planning and placement, institutional research, orientation, and retention.

"A number of institutions would say they're adopting an enrollment-management approach, but really what they're adopting is an admissions-management approach," says Don Hossler, an assistant professor of higher education and student affairs at Indiana University at Bloomington and the author of *Creating Effective Enrolment Management Systems*, published by the College Board.

Rather than making a full commitment to enrollment management, he says, one college on the verge of going out of business dropped balloons from the sky with scholarship certificates attached to them, to attract students in nearby communities.

Declines No Longer Expected

The U.S. Department of Education now says that previously projected sharp declines in enrollments are no longer expected, relieving the initial impetus for enrollment management.

It projects that the number of traditional college-age students will remain relatively stable in most parts of the country. Older, non-traditional students are taking up some of the slack in regions that are experiencing declines, according to enrollment officials.

Concern among enrollment officials has shifted more toward retention. According to data from 2,600 institutions collected by the Noel/Levitz Centers for Institutional Effectiveness and Innovation—a consulting company for enrollment management—a year after enrolling, about one in three students is not attending the institution he or she entered as a freshman.

Because so many students drop out or transfer to another college after their first year, a great deal of emphasis is being placed nationwide on making the freshman year as crisis-free as possible.

Seminars and study-skills courses, some modeled after a program called "University 101" at the University of South Carolina, are being offered around the country to ease the transition from high school to college.

SAINT CLOUD STATE U.

Dorothy Simpson: "I'm hoping that we are able to serve the students we have and the students we are recruiting much better."

At Saint Cloud, a one-credit course called "Orientation" gives freshmen the information they'll need for the rest of their college experience: how to choose a major, how to use the library, memory techniques, and tips on getting along with people in one's dormitory.

Across the country, such classes, as well as introductory prerequisite courses typically taken by freshmen, are frequently being taught now by the best professors.

According to Lee G. Noel, president of Noel/Levitz, many colleges are re-examining "killer courses"—those that freshmen have typically found difficult—to determine whether prerequisites should be put in place or the classes themselves should be changed.

Close student-faculty interaction, which helps give students the sense that they are a meaningful part of the academic community, is being touted as an effective means of retaining students. Faculty members are increasingly being asked to live in student dormitories, and more and more are taking an active role in supporting students' extracurricular endeavors. Along with administrators, they are more frequently asking students to lunch or inviting them to their homes for dinner.

To help limit confusion about degree requirements, choosing a major, and the like, centralized academic-advising centers—staffed by professionally trained advisers—are being set up at some institutions.

Because studies show that the highest dropout rates occur among the lowest achievers, enrollment managers are focusing on attracting better students through honors programs or vigorous recruitment of merit scholars.

And some admissions offices are trying to recruit applicants who will thrive at their particular campus, rather than trying to attract anyone and everyone.

To help officials assess their institutions' public image, the College Board is considering a survey that participating colleges would distribute to accepted applicants who both did and did not decide to enroll, according to Darrell Morris, executive director of data and special services.

The applicants would be asked by the institution to name the other colleges to which they applied, to say where they decided to go and why, and to describe how they perceived the surveying college as compared to the others they were considering.

If developed, the survey will be processed for the surveying institutions by the College Board.

'User-Friendly Environment'

Hoping to improve enrollments and retention by creating an atmosphere that was more sensitive to the needs of students, Saint Cloud's President McDonald initially set out to make his campus a "user-friendly environment," he says.

He set up an admissions committee, which later became the Enrollment Management Steering Committee—a group of 10 high-level administrators, including three vice-presidents, who meet at least eight times a year to brainstorm and measure progress.

He and the committee looked at financial aid and found it took 13 weeks to process a loan. They examined procedures for paying tuition and discovered block-long lines. They studied the curriculum and found gaps. They went to the dining hall and saw a need for renovation. They evaluated the secretarial staff and realized secretaries would be more helpful to students if they were better informed. They checked out student life and saw that a lot of people were going home on weekends.

Now, it takes only one week to process a student loan. Payment lines have been eliminated. Electrical engineering has been added to the curriculum, as have 85 new sections of already-existing classes, with more being scheduled for the spring. A renovation of the dining hall is planned. An orientation is being scheduled for the secretaries to give them basic advising information for students. Many new extracurricular organizations have been started, and fewer students are returning home Friday nights.

All applicants in the upper half of their high-school graduating classes, or with a composite score of 20 (out of 36) on the American College Testing Program's A.C.T. Assessment are admitted to Saint Cloud. But, hoping to attract better students, the university has beefed up its honors program and its recruitment of merit scholars.

The enrollment-management committee members decided to make the general-studies program, which caters to weaker students, somewhat smaller, so they could devote more resources to stronger students. They raised the standards for admission to the undergraduate business college.

The admissions office made its literature slicker and started pushing campus visits by prospective students, producing a snappy film for such occasions.

And, says Myron Umerski, registrar and director of advising and orientation, "we put together an orientation package that would make students want to come back."

Applications Up 24 Pct.

The results have been more positive than officials here ever expected.

The Minnesota Higher Education Coordinating Board had predicted that by this year the university would have no more than 8,500 students. Its estimate was far off: Today, the university has 14,220. Since 1982, the number of freshman applications has increased almost 24 per cent, freshman enrollment 26 per cent, and retention after the first year 5.6 per cent. Credit-hour production is up 17.3 per cent. Graduate enrollments are up 47 per cent.

"I'm hoping that we are able to

Achievement Leveled Off in 1986 After 4 Years of Growth, Bennett Reports

WASHINGTON

Educational achievement leveled off in 1986 after four years of steady gains, Education Secretary William J. Bennett reported last week.

Although high-school graduation rates slipped in 33 states and average scores on standardized college-admissions tests rose only slightly last year, Mr. Bennett called the overall upward trend in achievement since 1982 "very encouraging."

He credited the education-reform movement, sparked by the federal government's 1983 report *A Nation at Risk*.

"I don't think it's likely that we've peaked," he added.

The Department of Education's data rank the states on a variety of criteria, including test scores, per-pupil expenditures, and student-teacher ratios. A new feature of this year's data is a checklist of states in which education reform has taken place.

Praises State Leaders

Mr. Bennett praised state leaders for their efforts to upgrade the quality of schoolteachers. Twenty-seven states have established "alternative certification" programs to attract to the teaching profession college graduates who lack education courses, he said, and 41 offer financial incentives to teachers based on their performance. In addition, he noted, the average teacher's salary has risen faster than inflation over the last five years.

Mr. Bennett endorsed state efforts to hold students, teachers, and schools accountable for their performance. According to his report, 24 states require students to pass competency tests before they can graduate from high school; 12 require students to pass basic-skills tests before advancing to the next grade; 35 require new teachers to pass a competency test for certification; and 7 allow the state to intervene in "academically bankrupt" school districts where students are performing below standards.

Although Mr. Bennett said he was "generally pleased" with the reform movement, he complained about "the growth of the blob—the educational bureaucracy."

Graduation Rate Dips

Commenting on the finding that the national high-school graduation rate had dipped from 70.8 per cent to 70.6 per cent from 1984 to 1985, Mr. Bennett said he did not believe higher graduation standards accounted for the decline. High standards and low dropout rates go hand in hand, he said.

A limited number of copies of the report are available without cost from the U.S. Department of Education, Office of Public Affairs, Publications Branch, Room 2089, 400 Maryland Avenue, S.W., Washington 20202. —JEAN EVANGELAUF

College Admissions Test Scores by State, 1986

	Test	Average score	1-year change	Per cent tested
Alabama	ACT	18.2	+0.6	49.6%
Alaska	ACT	18.1	+0.5	37.6%
Arizona	ACT	19.3	+0.6	36.8%
Arkansas	ACT	18.1	+0.7	52.3%
California	SAT	904	0	43.3%
Colorado	ACT	19.9	+0.2	59.9%
Connecticut	SAT	914	− 1	69.5%
Delaware	SAT	917	− 1	59.6%
D.C.	SAT	852	+ 8	53.5%
Florida	SAT	895	+11	44.4%
Georgia	SAT	842	+ 5	55.4%
Hawaii	SAT	880	+ 3	51.3%
Idaho	ACT	19.2	+0.4	52.4%
Illinois	ACT	19.1	+0.2	60.2%
Indiana	SAT	874	− 1	49.5%
Iowa	ACT	20.6	+0.3	56.3%
Kansas	ACT	19.2	+0.1	60.6%
Kentucky	ACT	18.1	+0.2	50.9%
Louisiana	ACT	16.9	+0.4	57.5%
Maine	SAT	900	+ 2	51.8%
Maryland	SAT	911	+ 1	53.8%
Massachusetts	SAT	909	+ 3	66.5%
Michigan	ACT	18.9	0	51.2%
Minnesota	ACT	20.3	+0.1	30.5%
Mississippi	ACT	16.3	+0.8	60.3%
Missouri	ACT	19.2	+0.4	47.9%
Montana	ACT	19.8	+0.3	51.5%
Nebraska	ACT	20.0	+0.3	61.8%
Nevada	ACT	19.0	+0.5	40.1%
New Hampshire	SAT	935	− 4	61.0%
New Jersey	SAT	889	0	66.0%
New Mexico	ACT	17.9	+0.4	52.3%
New York	SAT	896	− 2	64.8%
North Carolina	SAT	835	+ 2	51.3%
North Dakota	ACT	18.5	+0.4	61.2%
Ohio	ACT	19.3	+0.1	46.4%
Oklahoma	ACT	17.8	+0.3	48.1%
Oregon	SAT	930	+ 2	46.0%
Pennsylvania	SAT	894	+ 1	54.4%
Rhode Island	SAT	898	+ 3	58.7%
South Carolina	SAT	826	+11	50.0%
South Dakota	ACT	19.9	+0.7	61.9%
Tennessee	ACT	18.0	+0.4	56.6%
Texas	SAT	877	− 1	39.3%
Utah	ACT	19.1	+0.2	61.7%
Vermont	SAT	916	− 3	61.8%
Virginia	SAT	908	0	58.9%
Washington*	—	—	—	—
West Virginia	ACT	17.7	+0.3	47.5%
Wisconsin	ACT	20.5	+0.2	38.8%
Wyoming	ACT	19.7	+0.3	55.6%
U.S. average	ACT	18.8	+0.2	
	SAT	906	0	

Note: The ACT (American College Testing Program's ACT Assessment) is scored on a scale from 1 to 36. The SAT (the College Board's Scholastic Aptitude Test) is scored on a scale from 400 to 1,600. For each state one score is given, depending on which test was taken by more students. The table shows the percentage of high-school graduates who took the test.

* Omitted because fewer than 35 per cent of the students took either test.

SOURCE: U.S. DEPARTMENT OF EDUCATION

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THE CHRONICLE

of Higher Education.

ISSN 0009-5982

March 4, 1987 • $1.95
Volume XXXIII, Number 25

News Summary

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The bicentennial of the Constitution has had little effect on research into its history and impact, many scholars say. Story on Page 6.

The curator of Chinese paintings at the Freer Gallery of Art is everything from conservator to calligrapher. Story on Page 3.

A government effort to restrict access to unclassified information in data bases drew fire last week. Story on Page 12.

The president of Northwestern University upheld the denial of tenure to a faculty member who disrupted a speech. Story on Page 13.

Professors attempting to teach "science, technology, and society" courses are encountering obstacles. Story on Page 14.

The White House has ordered the National Institutes of Health to stop reducing the size of grants to scientists. Story on Page 17.

Many lawmakers in Congress are looking for ways to reinstate tax deductions that were eliminated in the tax-code revision. Story on Page 17.

State policymakers should proceed cautiously in developing tuition-prepayment plans, according to the Education Commission of the States. Story on Page 29.

Reform of France's universities seems to be stymied by those who fear the loss of the system's egalitarian tradition. Story on Page 37.

China scholars from 38 American universities sent a statement to the Chinese government, protesting its crackdown against intellectuals. Story on Page 37.

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DEBATE OVER COSTS HEATS UP

Tuition Hikes Since 1970 Have Averaged Slightly More than Inflation, Study Finds

By JEAN EVANGELAUF

WASHINGTON

College tuition fees have risen markedly faster than consumer prices since 1980, but over a 16-year period—from 1970 through 1986—they rose at an average annual rate of only 1 percentage point above that of inflation, according to a study issued last week by the American Council on Education.

The study was the latest round in an increasingly sharp debate over why college costs are skyrocketing. It was released as many colleges were announcing price increases for next fall that far exceed the rate of inflation.

Average Yearly Increases in Tuition

	1970-71 to 1980-81	1980-81 to 1986-87	1970-71 to 1986-87
All institutions*	6.6%	9.8%	7.8%
All public institutions*	6.1%	9.8%	7.5%
Universities	6.7%	9.9%	7.9%
4-year	8.1%	10.0%	8.8%
2-year	7.5%	9.5%	8.2%
All private institutions*	7.6%	9.9%	8.4%
Universities	8.0%	11.0%	9.1%
4-year	7.8%	9.8%	8.5%
2-year	8.1%	8.3%	8.2%
Consumer Price Index	7.8%	4.9%	6.7%
Disposable personal income per capita	8.2%	6.5%	8.2%

* Weighted by enrollment.

SOURCE: TERRY W. HARTLE, ARTHUR HAUPTMAN

Harsh Words for Critic

In issuing the report, Robert H. Atwell, president of the council, had harsh words for the chief critic of the recent increases in costs, Education Secretary William J. Bennett.

Mr. Bennett has said repeatedly that colleges are raising tuition because they know their students can obtain federal assistance to cushion the increase. The way to halt the price spiral, he reasons, is to cut federal spending on students.

"The evidence suggests that the Secretary is dead wrong," Mr. Atwell told reporters at a press conference last week. In the 1970's, federal aid rose more rapidly than costs, he said, while during the 1980's, college costs rose faster than aid.

Secretary Bennett has a right to speak about costs, Mr. Atwell said, "but because it is not a simple matter to understand, I would have expected the Secretary—who, to my knowledge, is not a student of higher-education finance nor has he ever been responsible for setting college tuitions—to have arranged for some careful analysis before speaking and writing on the topic.

'Unsubstantiated Assertions'

"If his statements are based on analysis, we have not seen that analysis. What we have heard and read are unsubstantiated assertions, misrepresentation of what has happened in federal student aid, and the complete omission of any reference to what would have happened to students and institutions had the policies of this Administration been adopted.

"If it is defensive to respond to this approach by setting the record straight, then

Continued on Page 30, Column 1

NCAA Bars Football at Southern Methodist for Year; Penalties Are the Toughest Ever

By DOUGLAS LEDERMAN

DALLAS

The National Collegiate Athletic Association last week barred Southern Methodist University from playing football next season and restricted its schedule for the season after that.

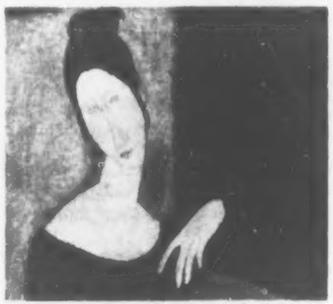
The penalties, the harshest in college football history, came as punishment for S.M.U.'s seventh rules violation since 1958. University and N.C.A.A. investigators discovered that S.M.U. athletic officials, using money contributed by one unnamed booster, had paid players a total of $61,000 since the team was last put on probation in August 1985.

In this first test of its newly adopted sanctions for repeat violators, the N.C.A.A.'s Committee on Infractions stopped short of imposing the full force of the so-called "death penalty," which could ban a program for two years at an institution found guilty of major violations twice within five years.

But the punishment against Southern Methodist, which also put severe limitations on recruiting, size of coaching staff, and scholarships as part of a probation

Continued on Page 36, Column 1

The report on sports rules violations by Southern Methodist begins on Page 33.



DETAIL FROM MODIGLIANI'S "LA FEMME DE L'ARTISTE"; NORTON SIMON ART FOUNDATION

UCLA: $750-Million in Art

Norton Simon has agreed in principle to give his $750-million art collection to the University of California at Los Angeles. See story on Page 24.

With Fried Catfish and Black-Eyed Peas, a Texas College Woos Legislators

By SCOTT JASCHIK

PRAIRIE VIEW, TEX.

The hard economic times facing this state have prompted a whole new style of politicking.

It used to be that colleges and universities waged aggressive lobbying campaigns every time state legislators proposed cutting the budget for higher education.

Things are so bad now—the next biennial state budget may be more than $1-billion less than the current one—that some colleges have begun employing slick lobbying tactics long before anybody even makes the slightest mention of a budget cut or the merger of several institutions. And some colleges without the political clout of the state's flagship institutions are no longer willing to take a back seat in the lobbying process.

A quintessential example of the new approach was a recent campus tour for legislators conducted by Prairie View A&M University.

Everything that could be used to the university's political advantage was put on display. The day began with a two-hour bus ride from Austin during which two students in military uniforms described their backgrounds and told the lawmakers, "We're native Texans, and proud."

On the way to the campus, a stop was arranged for a feast of such Southern delicacies as fried catfish and black-eyed peas. Police cars escorted the buses on the final leg to the campus, and television news cameras were on hand to mark the arrival of more than 40 legislators.

University administrators say the attention to detail was essential. Until only a few years ago, Prairie View, a historically black institution, had been largely ignored by the state. But through some shrewd political maneuvering, it has managed to ob-

Continued on Page 20, Column 1

President Reagan agrees to have his budget chief meet with the presidents of black colleges. See story on Page 21.

Tuition Study Refuels Debate over Rising Costs

Continued from Page 1

those of us who have been respondents are indeed defensive," he said. "I prefer to say we are a truth squad."

In response to the report, Mr. Bennett issued this statement: "A.C.E.'s report confirms what we've been saying—that college costs have gone up at twice the rate of inflation in the 1980's. Having acknowledged this fact, A.C.E. pleads that the causes are shrouded in mystery and offers no leadership at all in dealing with the problem. Instead of kicking the federal government and thereby kicking the American taxpayers, why doesn't Mr. Atwell call on his member institutions to keep costs down?"

Bruce M. Carnes, Deputy Under Secretary of Education, said the department was attacking the cost issue on several fronts. One effort, he said, is its proposal to eliminate government subsidies on student loans. "The student-aid programs have the fundamental, classic faults of all subsidy programs, be they agricultural or whatever," he said. "They have the effect of keeping prices up, not down."

'A Vein of Resentment'

Mr. Bennett will continue speaking out on the topic, according Mr. Carnes. "It's clear he has tapped a vein of popular resentment and concern here, and given voice to what the general populace is alarmed about."

The department may also publish information on cost control to stimulate better financial management, said Mr. Carnes, who added that one cost-cutting idea that colleges might think about is sharing library resources with neighboring institutions.

Mr. Carnes said the department had not pursued a proposal it made last fall that would have imposed limits on aid to students who attend institutions where costs have increased more than the rate of inflation.

The news about college costs is both bad and good, according to the A.C.E. report, which was written by Terry W. Hartle, a fellow at the American Enterprise Institute, and Arthur Hauptman, an education consultant. The A.C.E. said the views in the study were those of its authors and not necessarily those of the council.

> "There are so many holes in their argument it could have been made in Switzerland."

The bad news: Following a decade of relatively slow growth, tuition shot up during the 1980's. This academic year, tuition averages $6,150 at private institutions and $1,100 at public ones, according to government estimates. In the last six years, college costs have risen about twice as fast as the Consumer Price Index, outpacing increases for major consumer goods such as new cars, new houses, and food.

The good news: Over the long run, tuition fees are not so far out of line with other prices. From 1970 to 1986, tuition (at all institutions combined) increased 232 per cent—faster than increases in food and new cars, but slower than costs for new houses, medical care, and energy. Over the 16-year period, annual tuition increases averaged about 1 percentage point above inflation.

"Ultimately," Mr. Hartle said at the A.C.E. press conference, "the issue is whether tuition increases in the 1980's are an aberration in the historical record or the start of a new pattern."

He said the simple answer to the question of why costs had increased so rapidly was, "Nobody knows." Among the possible reasons, he added, is the desire to restore the purchasing power of faculty members and to spend more institutional money on student aid.

At the nation's most selective institutions, supply and demand may also be a factor in costs, according to Mr. Hartle, who said that, over the last 10 years, costs at highly selective institutions had risen about 11.6 per cent annually, compared with an average of 10 per cent at those that are less selective.

Bennett's Theory Challenged

"Some elite schools have discovered that they can increase tuition with no appreciable effect on the number or quality of their applicants," he said. "As a result, they have less incentive to hold down their prices."

While saying the practice wasn't widespread, Mr. Hartle said some colleges had raised their prices sharply in the belief that the public associates high prices with high quality.

Mr. Hartle offered two reasons for rejecting Mr. Bennett's theory that federal aid played a large role in cost increases: "Student aid pays for one-third or less of the total price of college attendance," he said, "So federal student aid could only be counted on to relieve a small part of tuition increases." In addition, he said, past experience shows that aid and tuition have increased at different rates. During the 1970's, federal aid more than tripled and tuition lagged behind. In the 1980's, aid increased by about 20 per cent, while tuition rose 75 per cent, he said.

More Research Planned

Much of the revenue generated by tuition increases has been spent by colleges and universities on student aid, said Mr. Atwell, who noted that from 1980 to 1985, such aid had gone up from $3-billion to $5-billion a year. Private colleges, which enroll about 20 per cent of the nation's college students, account for half of that spending, increasing their own assistance, he said, "to maintain a diverse student body."

Determining whether college is more or less affordable than it used to be depends on the measurements of income used, according to the report. Comparing costs to disposable personal income per capita shows the ability to pay for college is about the same as it was in 1970, while using median family income as the yardstick shows the ability to pay has dropped considerably. Mr. Hartle said he preferred the personal-income measure because it more accurately reflects changes in the standard of living.

Mr. Atwell said the council intended to sponsor additional research in the area of college costs.

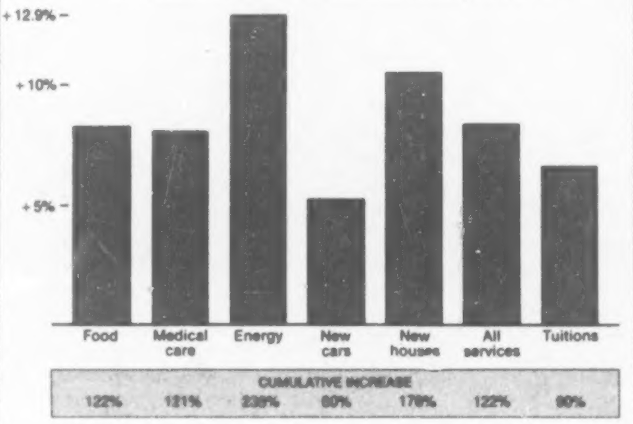
Mr. Carnes of the Education Department said of the council's report, "There are so many holes in their argument it could have been made in Switzerland." He said that in looking at federal aid increases in the 1970's, the study had improperly included federal spending on non–need-based aid, specifically, veterans' and Social Security benefits.

In response, Mr. Hauptman said that even excluding those two special programs, federal spending far outpaced tuition in the 1970's.

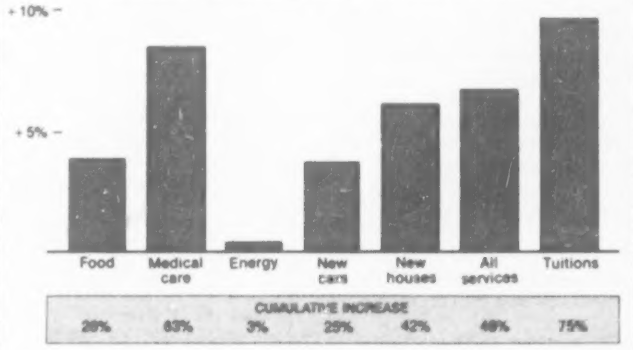
The American Council on Education is not the only association attempting to defuse concern over tuition increases.

At its annual meeting here last month, the National Association of Independent Colleges and Universities armed its members with a statis-

Average Annual Change in Prices of Selected Goods and Services, 1970-80



Average Annual Change in Prices of Selected Goods and Services, 1980-86



SOURCE: TERRY W. HARTLE, ARTHUR HAUPTMAN

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tical report called "The Truth About Costs in the Independent Sector of Higher Education" and urged them to cite it in making the case for preserving federal student assistance. The association also organized a press conference with four college presidents, who spoke about tuition increases.

The Association of Governing Boards of Universities and Colleges has issued *The Tuition Booklet*, a nine-page explanation of why tuition is rising and why the trend is unlikely to abate over the next few years. Since November the organization's members have purchased about 180,000 copies to distribute to parents, students, faculty members, and alumni.

Reasons Listed

That report lists these reasons for the increases:

► Colleges and universities are attempting to restore the purchasing power of faculty salaries, which increased more slowly than inflation during the 1970's.

► Costs of items such as books, periodicals, and equipment are soaring.

► Colleges are paying a larger share of the costs of scientific equipment because of cuts in federal spending for research-and-development plant expenditures.

► Colleges, like other employers, are paying higher Social Security taxes for their employees.

► Colleges are relying on tuition to cover a larger share of their budgets because federal aid and gift income have not kept pace with rising costs.

In the meantime, colleges that have announced their tuition costs for next fall have tried to point out that their charges are not out of line with their competition and to stress areas where they plan to increase their own spending.

For example, in its announcement that tuition would rise 12 per cent next year, to $8,133, Santa Clara University officials noted, "Of the 11 private California colleges competing most directly with S.C.U., Santa Clara's tuition rates ranked sixth in 1982-83 and ninth in 1986-87."

Stanford: 'Relatively Constant'

Stanford University, which will increase tuition 6 per cent, to $11,880, provided a table showing that, during the past decade, Stanford's costs "have remained relatively constant compared to other leading private institutions."

In announcing that tuition will rise 6.5 per cent, to $12,550, Princeton University officials issued a four-page press release highlighting the areas in which spending will increase beyond inflation.

To help students and parents plan for college costs, some institutions have established programs to freeze tuition rates.

Southeast Missouri State University will not raise tuition for students who prepay their bills. To participate in the plan, students who are Missouri residents pay $2,420—which represents tuition charges for two years—at the start of the freshman year, and another $2,420 at the start of the sophomore year. Students have five years in which to complete their studies. Those who leave the university may obtain a refund, without interest.

At Rider College, freshmen and transfer students who sign up for the "Guaranteed Tuition Plan" next year will pay $7,500 annually. For those who don't want the plan, tuition will be $7,100, with no guarantee of what future increases will be. The college began the program this year—with the price set at $6,850—and nearly all of Rider's freshmen opted for it.

Copies of the cost study, "Tuition Increases Since 1970: A Perspective," are available free from the American Council on Education, Office of Public Affairs, One Dupont Circle, Washington 20036.

"The Truth About Costs in the Independent Sector of Higher Education" is available free from the National Institute of Independent Colleges and Universities, 122 C Street, N.W., Suite 750, Washington 20001-2190.

Copies of *The Tuition Booklet* are available for 50 cents each from the Association of Governing Boards, One Dupont Circle, Suite 400, Washington 20036. Contact A.G.B. for bulk rates.

Caution Advised on Prepayments

Continued from Page 29

Pennsylvania, West Virginia, and Wisconsin.

Low. Mississippi, Virginia, and Washington.

Preliminary. Alabama, Arizona, Arkansas, Colorado, Delaware, Kentucky, Louisiana, Minnesota, Nevada, New Hampshire, New York, North Carolina, North Dakota, Ohio, Oklahoma, Oregon, Rhode Island, South Carolina, Tennessee, Texas, Utah, and Vermont.

None. Alaska, Hawaii, Idaho, Kansas, Montana, Nebraska, New Mexico, and South Dakota.

In categorizing the states, the commission warned that because the debate was moving so swiftly, some information might already be out-of-date.

Private-College Unit Backs National Plan

WASHINGTON

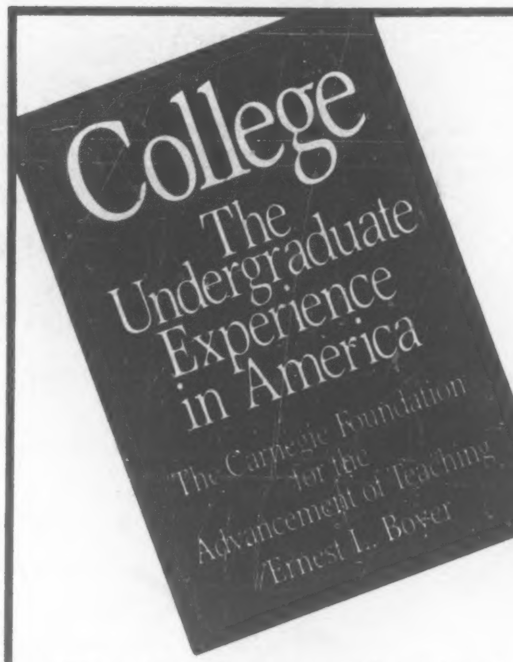
A panel of the National Association of Independent Colleges and Universities has recommended a national prepayment plan for private colleges as an alternative to programs sponsored by states or by individual institutions.

"Such a plan, if properly designed and carefully implemented, could be an important part of a long-term solution to the affordability problem confronting independent higher education," said the panel's report.

Supplement to Existing Aid

A national plan, it said, should supplement, not replace, existing student-aid programs; enhance student choice; provide for portability among institutions; be simple; be easy to implement; be structured to receive "appropriate incentives" from federal and state governments; and be structured to assure the integrity of the funds and a "reasonable allocation" of risk between purchasers and institutions.

The panel, chaired by William J. Moore, president of the Association of Independent California Colleges and Universities, said a national prepayment plan was just one step in making college more affordable. It also urged college officials to restrain tuition increases, seek additional federal and state student aid, and lobby for tax incentives to encourage families to save for college.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3/19/87 C2175-1

THE CHRONICLE
of Higher Education.

ISSN 0009-5982

March 18, 1987 • $1.95
Volume XXXIII, Number 27

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A calendar of spring and summer events in academe will be found in a pull-out section following Page 58.

Faculty members are battling the University of California for access to tenure files. Story on Page 16.

Complying with the new federal immigration law causes headaches for colleges. Story on Page 17.

Business leaders in Mississippi are lobbying for more money for higher education. Story on Page 22.

Support for the Defense Department's University Research Initiative may be in jeopardy. Story on Page 22.

Terrel H. Bell, former Secretary of Education, is critical of President Reagan's failure to press for education reform. Story on Page 23.

Professors are becoming increasingly involved in raising money for their institutions. Story on Page 34.

A federal court has upheld the University of Michigan's withdrawal of a degree to a student found guilty of fraud. Story on Page 40.

Documents from an investigation of the University of Houston football program suggest a scheme for paying players. Story on Page 47.

A California judge enjoined the N.C.A.A. from barring an athlete from competition for refusing to submit to a drug test. Story on Page 47.

Student revolutionaries in Guatemala have been forced into the background. Story on Page 53.

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Software for Teaching Given Little Credit in Tenure Reviews

It's not considered research by many promotion panels

By JUDITH AXLER TURNER

Faculty members who write computer software for teaching often find that their chances of getting credit for it during promotion-and-tenure reviews are discouragingly slim.

In fact, many younger faculty members—the ones who have had the most experience with computing during their own years in college—say they are being advised to forget about writing software or incorporating computers into their courses, at least until after they have tenure. They are being told instead to spend their time doing research and getting it published.

Some faculty members say that even when software development is recognized, it is credited as instruction or service, rather than as research. The latter is more prestigious—and more important in tenure-and-promotion decisions at many universities.

The situation worries leaders in academic computing, who believe that until there is a broad base of instructional software, the computers on which so many institutions have spent so much money will not become integral to higher education.

"The key to the revolution in higher education is the development of appropriate software," says Richard M. Cyert, president of Carnegie Mellon University. And, he adds, "this development must come from faculty."

Not All Are Suffering

Not all young faculty members are suffering because of their involvement with software development, however.

William Dennis Horn, for instance, was recently granted tenure and promoted to associate professor of technical communications at Clarkson University—largely

Continued on Page 20, Column 1

New Materials that Conduct Electricity Without Resistance Astound Physicists

By KIM McDONALD

Paul Ching-Wu Chu has never seen anything like it.

His phone rings off the hook, bringing reports and questions from researchers around the world. Physicists wanting to meet and speak with him must line up outside his office. Some of his appointments now have to be scheduled as early as 7 in the morning. He has become an overnight celebrity.

Many scientists have never seen anything like it, either.

'The most significant scientific discovery of the second half of this century'

After more than a decade of failed experiments that had persuaded many of them to abandon hope, a surprising development last spring by two Swiss scientists gave Mr. Chu, a physics professor at the University of Houston, and his colleagues at Houston and at the University of Alabama at Huntsville the clue to surpassing what had long been thought to be an impossible barrier.

The achievement by Mr. Chu's team, which created new kinds of "superconducting" materials that all lose electrical resistance at cold, rather than ultracold, temperatures, astonished physicists when it was announced last month (*The Chronicle*, February 25).

Many of them say without reservation that it is the greatest scientific discovery since the invention of the transistor, which made possible such developments as modern radio and television.

The superconductive materials, scientists say, will pave the way for the commercial development of levitated trains that can travel above their tracks at speeds of 300 miles per hour; wires that can transmit electricity across the country with no loss in power; faster and more compact computers; energy-efficient satellites; and extremely powerful magnets.

"It's the most significant scientific dis-

Continued on Page 12, Column 1

UNIVERSITY OF HOUSTON

Paul Chu and his colleagues have seen indications of superconductivity at 240 degrees Kelvin—the temperature of a cold winter's day in Alaska.

Racial Incidents Worry Campus Officials, Prompt U. of Massachusetts Study

By MICHELE N-K COLLISON

AMHERST, MASS.

For the past month the most widely read material on the University of Massachusetts campus here hasn't been on any professor's reading list. What has captured the campus's attention is a 53-page report criticizing the university's handling of a racial brawl after the seventh World Series game.

For days after the report was released, not enough copies could be produced to satisfy the demand. Finally, the student newspaper, the *Massachusetts Daily Collegian*, printed the text. Since then, a flurry of statements from faculty and student groups have been issued in support of its findings.

The popularity of the report pleases Frederick A. Hurst, who wrote it. "I hope my report lives forever," says Mr. Hurst, who heads the Massachusetts Commission Against Discrimination, a state agency. "I hope it will help make this university a better place. I hope other schools take a look at it, because it represents a truly in-depth case study of a racial incident." Mr. Hurst is an administrative law judge.

10 Injured in Brawl

Mr. Hurst wrote the report at the request of Joseph Duffey, the university's chancellor, after it became clear that no one at the university could get to the bottom of the story. The October 27 brawl left 10 people injured, including one black student who was beaten unconscious. It was the most violent of several racial incidents reported on college campuses this year.

But Mr. Hurst wrote that it would be a mistake to conclude "that problems at the University of Massachusetts at Amherst are any worse than problems at most other universities throughout the country."

Among incidents that have been reported on other campuses:

► At the Citadel, five white students wearing sheets and carrying a charred paper cross taunted a black cadet in his dormitory bed.

► At Northern Illinois University, white students shouted racial slurs at people entering the campus center to hear the civil-rights leader Jesse Jackson speak.

► University of Michigan officials closed a campus radio station after a

Continued on Page 41, Column 1

Fewer White Men Earned Ph.D.'s in 1985

WASHINGTON

Non-citizens and American women and minority-group members in 1985 made up a record proportion of the number of people earning doctorates in the United States, the National Research Council has reported.

While the number remained relatively stable in the last decade, the percentage of white men declined, the latest annual Survey of Earned Doctorates found. The total number of doctorates received in 1985 was 31,201.

Significant changes also occurred in the fields in which students earned their doctoral degrees. The number in the life sciences grew 14.4 per cent from 1975 to 1985, while the number in the humanities dropped 29.8 per cent.

Declining proportions of the graduates, especially women and blacks, chose academic employment. More and more chose to go into business and industry.

'What's Going on Here?'

"You have to ask, What's going on here?" Susan Coyle, the project's manager, said in an interview. "Is it simply that women and blacks don't have the support and they have to rely on their own resources? Is it that they can get better-paying jobs and don't want to invest the time in a program that's going to take them 8 to 10 years to complete?"

Of non-citizens, the biggest group—and one of the fastest growing—was east Asians. The number from Africa increased greatly, as well.

Canadians composed 13.7 per cent of the foreign group in 1960 and only 4.3 per cent in 1985.

From 1975 to 1985, the proportion of new Ph.D.'s earned by women increased from 23.3 per cent to 34.3 per cent.

While the number of women increased in all groups, the greatest growth was among Americans.

Despite setbacks in some years, there was a small overall increase in the percentage of doctorates going to American minorities, from 6.3 to 9.1 per cent in the 10-year period.

Distribution by Field

Of the 24,561 U.S. citizens and non-U.S. citizens with permanent visas who earned doctorates in 1985, 93 were American Indian, 1,067 were Asian, 1,040 were black, 631 were Hispanic; and 21,174 were white. The racial and ethnic makeup of 556 U.S. recipients was not known.

The following table shows the distribution, by field, of U.S. doctorate recipients who were members of minority groups:

	American Indian	Asian	Black	Hispanic
Education	41.9%	13.4%	52.3%	32.2%
Engineering	1.1%	17.5%	2.1%	2.9%
Humanities	8.6%	8.3%	7.3%	17.2%
Life sciences	19.4%	24.9%	7.7%	13.4%
Physical sciences	4.3%	19.4%	3.3%	7.5%
Professional	6.5%	4.5%	8.1%	5.2%
Social sciences	18.3%	12.0%	19.1%	21.6%

Copies of *Summary Report 1985: Doctorate Recipients From United States Universities* may be obtained free from the Doctorate Records Project, Office of Scientific and Engineering Personnel, National Research Council, 2101 Constitution Avenue, N.W., Washington 20418.

—ELIZABETH GREENE

FACT-FILE

A Profile of 1985 Recipients of Doctorates

	Arts and humanities	Business and management	Education	Engineering, mathematics, and physical sciences	Life sciences	Social sciences	Other professional fields[1]	All fields[2]
Doctoral degrees conferred	3,428	703	6,717	7,696	5,748	5,720	1,063	31,201
Median age at conferral	34.7	35.0	38.7	30.2	31.3	33.0	37.3	33.3
Median number of years from bachelor's degree to doctorate	11.7	11.8	15.1	7.5	8.4	9.9	13.8	10.2
Sex								
Male	56.6%	81.8%	48.2%	88.1%	67.7%	58.9%	57.6%	65.7%
Female	43.4%	18.2%	51.8%	11.9%	32.3%	41.1%	42.4%	34.3%
Citizenship								
United States	83.1%	64.8%	85.5%	56.2%	77.1%	79.3%	76.2%	74.5%
Non-U.S., permanent visa	4.4%	8.2%	1.9%	7.1%	3.3%	3.7%	2.8%	4.2%
Non-U.S., temporary visa	7.7%	21.3%	8.5%	32.2%	16.0%	11.6%	13.5%	16.7%
Unknown	4.8%	5.7%	4.1%	4.5%	3.6%	5.4%	7.4%	4.6%
Marital status								
Married	56.0%	65.1%	66.9%	55.1%	57.7%	53.5%	59.2%	58.3%
Not married	37.4%	28.0%	27.8%	39.0%	37.2%	39.3%	32.3%	35.6%
Unknown	6.6%	6.9%	5.3%	5.9%	5.1%	7.2%	8.6%	6.1%
Per cent with bachelor's degree in same field as doctorate	58.8%	38.8%	38.7%	72.3%	58.3%	58.5%	24.2%	55.9%
Planned postdoctoral study								
Fellowship	3.9%	0.4%	1.4%	10.8%	27.9%	8.5%	1.3%	10.1%
Research associateship	1.1%	1.1%	1.3%	17.0%	17.0%	3.1%	0.9%	8.4%
Traineeship	0.1%	0.4%	0.6%	1.0%	1.5%	1.8%	0.1%	1.0%
Other	1.4%	0	0.7%	0.6%	3.5%	1.0%	1.1%	1.3%
Planned postdoctoral employment								
Educational institution	66.2%	74.3%	63.1%	22.8%	23.0%	37.6%	52.7%	41.3%
Industry or business	6.1%	11.0%	7.1%	29.9%	9.7%	12.4%	8.3%	14.2%
Government	2.5%	2.3%	10.0%	6.3%	6.8%	10.8%	7.9%	7.5%
Non-profit organization	5.3%	0.6%	5.1%	1.1%	1.9%	10.6%	13.5%	4.7%
Other or unknown	4.8%	1.3%	4.0%	1.8%	2.1%	5.7%	3.0%	3.4%
Postdoctoral status unknown	8.6%	8.7%	6.8%	8.8%	6.5%	8.5%	11.1%	8.0%
Primary postdoctoral work								
Research and development	7.0%	20.9%	5.5%	64.1%	48.7%	22.9%	10.5%	27.5%
Teaching	72.0%	63.2%	35.0%	24.1%	26.8%	30.8%	48.5%	36.9%
Administration	5.6%	5.5%	36.0%	1.5%	4.3%	6.5%	14.0%	13.5%
Professional services	5.0%	2.7%	13.2%	3.5%	9.4%	31.0%	15.7%	12.8%
Other	4.3%	2.1%	2.4%	1.9%	4.4%	3.3%	4.4%	3.0%
Unknown	6.1%	5.6%	7.8%	5.0%	6.4%	5.5%	6.8%	6.3%
Region of employment after doctorate								
New England	8.4%	5.1%	4.6%	6.7%	3.9%	6.4%	4.0%	5.8%
Mid-Atlantic	14.8%	12.0%	13.8%	17.2%	11.9%	18.2%	14.9%	15.3%
South Atlantic	13.3%	14.3%	16.3%	13.0%	14.2%	15.0%	15.0%	14.6%
North Central	21.6%	23.3%	21.2%	19.1%	21.7%	19.6%	20.0%	20.6%
South Central	12.4%	18.3%	13.6%	8.7%	11.6%	9.6%	15.4%	11.6%
Mountain	4.0%	3.9%	5.6%	4.9%	4.1%	4.1%	3.3%	4.6%
Pacific and insular	10.1%	9.8%	8.5%	13.1%	8.6%	10.8%	9.8%	10.3%
Foreign	7.2%	9.3%	7.2%	12.2%	19.7%	9.0%	11.3%	10.3%
Region unknown	8.2%	4.0%	9.3%	5.1%	4.3%	7.3%	6.4%	7.0%

[1] Excludes business and management, which is listed separately.
[2] Includes degree categories not listed separately.

SOURCE: SURVEY OF EARNED DOCTORATES, NATIONAL RESEARCH COUNCIL

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THE CHRONICLE
of Higher Education.

ISSN 0009-5982

April 1, 1987 • $1.95
Volume XXXIII, Number 29

News Summary

Articles on inside pages

Conflicts over the ownership of human cells are caught in a tangle of laws that do not resolve the issue, a study has found. Story on Page 7.

The treatment of college writing instructors is "fundamentally unfair," says an association of composition teachers. Story on Page 13.

Oklahoma's chancellor of higher education is fighting budget cuts and charges of unethical behavior. Story on Page 19.

Corporate mergers have had a devastating effect on the charitable giving of U.S. companies, some experts say. Story on Page 23.

Many non-profit concerns, including some private colleges, may lose their tax-exempt status, a scholar predicts. Story on Page 23.

Nursing programs that offer the bachelor's degree must work more aggressively to attract students, educators agree. Story on Page 28.

In the shadow of a continuing football scandal, the Board of Trustees at Southern Methodist University has abolished its 21-member policy-making arm. Story on Page 31.

Stanford University successfully combines big-time college athletics and top-level academic achievement. Story on Page 31.

Academics in Peru say the government is violating the country's tradition of university autonomy. Story on Page 37.

Frederic P. Herter, a surgeon and the chairman of the trustees of the American University of Beirut, has been chosen as the university's president. Story on Page 37.

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Supreme Court Upholds Affirmative-Action Plans in Its First Explicit Ruling on Voluntary Goals

By CHERYL M. FIELDS

WASHINGTON

In its most sweeping endorsement of affirmative action, the Supreme Court last week firmly upheld voluntary plans that help qualified women and members of minority groups gain jobs traditionally dominated by white men.

It was the Court's first ruling explicitly upholding affirmative action for women.

Lawyers said the 6-to-3 decision was particularly significant for academe because it approved the type of plan that hundreds of colleges and universities have adopted.

Such a plan sets numerical hiring and promotion goals based on statistical data showing that women and minorities are underrepresented in various jobs in comparison to their availability. The plans are considered voluntary because they were not ordered by the courts, even though many of them were adopted under pressure from federal civil-rights investigators.

Specifically, the Court:

► Ruled that sex was one factor that could legitimately be considered in promotion decisions by employers who have adopted voluntary, flexible plans aimed at remedying "manifest imbalances" in the number of women and members of minority groups they employ in "traditionally segregated job categories."

► Upheld the principle that affirmative-action plans may be justified by statistical evidence that fewer females and minority-group members are employed in particular jobs than are qualified and available for such jobs. Employers do not have to base affirmative-action plans on evidence of specific past discrimination, the Court said.

The Court noted that if employers had to admit to past discrimination to justify their plans, the admissions would make them more vulnerable to lawsuits and deter their voluntary efforts to hire, train, and promote women and members of minority groups.

Major Victory Claimed

The majority opinion, written by Justice William J. Brennan, Jr., stressed that the plan in the lawsuit before the Court, drawn up by the Transportation Agency of Santa Clara County, Cal., had set numerical goals that were not to function as quotas, but as "reasonable aspirations" for correcting imbalances in the work force. No positions were specifically set aside for women.

The decision was hailed as a major victory by women's organizations and civil-rights groups. It was one of the few decisions on affirmative action in the last few years to produce a majority opinion—one supported by at least five justices. Several earlier cases were decided by patching together five votes based on different legal reasoning.

"The issue is no longer whether affirmative action will be upheld, but simply what kinds of plans are valid," said Mary F. Berry, a professor of history and law at

Continued on Page 20, Column 1

The Residue from Academics' Lawsuits: Often Anguish for Everyone Involved

By LIZ McMILLEN

When a faculty member sues a college, the case is almost certain to leave a string of scarred careers, poisoned departmental friendships, and punctured egos.

Colleges suffer as well, through damaging publicity and the steep cost of mounting a defense.

In a forthcoming book, two scholars, George R. LaNoue and Barbara A. Lee, take a wide-ranging look at what happens to people and universities caught up in the courts.

Their verdict: Nobody really wins an academic discrimination suit.

1 in 5 Chance of Winning

"Neither side realizes what they're in for," Ms. Lee says.

"The plaintiffs don't understand the difficulties of winning—the time and the financial and emotional costs involved. They don't understand that no one is as interested in their case as they are, and that after 10 years, their support network is not going to be strong.

"The defendants don't understand what they're exposed to in defending their decision, or the real trauma a department goes through when one faculty member is pitted against another."

What's more, most faculty members end up losing in court. According to figures compiled by the authors, faculty plaintiffs have only a one-in-five chance of winning.

Hostilities Can Fester for Years

When they do win, their victories are often Pyrrhic. "It's like a war," says Mr. LaNoue. "There are very heavy casualties all along the way, even in victory."

Because academe relies so much on voluntary cooperation among faculty members, hostilities can fester for years after the day-to-day operations of a department are dragged into a courtroom.

Yet colleges and universities have

Continued on Page 13, Column 3

Faculty members have filed 25 complaints at one university: Page 12

Membership Battle Provides Rare Look at Science Academy's Internal Politics

By COLLEEN CORDES

There may be blood on the floor when the ballots are finally counted this month at the National Academy of Sciences.

A nasty skirmish over membership in the academy has pitted a brilliant and outspoken mathematician against one of the country's leading political scientists and raised questions about just how welcome the social sciences are among some members of that prestigious body.

It has also provided a rare peek at the internal politics of the academy—a rather stuffy organization better known for decorous deliberations and for shrouding the particulars of its election rites in secrecy.

The academy, an exclusive private club for scientists and engineers, was established by Congress more than a century ago. It often advises the federal government on scientific issues.

Ever since last spring, Serge Lang, a professor of mathematics at Yale University and a relative newcomer to the academy himself, has been waging a personal crusade to bar Samuel P. Huntington, a professor of political science at Harvard University, from the club.

Accusations of 'Bogus Science'

Mr. Lang has accused Mr. Huntington of "bogus science" and "pseudomathematics," citing several pages of work by Mr. Huntington, including two pages in his widely used textbook in comparative politics, *Political Order in Changing Societies*.

In those examples, Mr. Lang charges, Mr. Huntington's political opinions are dressed up with all the trappings of science and of mathematical terms and symbols, but without their meaning. The effect, he adds, is "to give the illusion of science without the content."

Mr. Huntington, president of the Ameri-

Continued on Page 6, Column 2

New Methods Developed for Paying Tuition

Prompted by changes in federal student-aid and tax policies that will begin to have dramatic effects in the next academic year, colleges and lenders are devising new ways to help families pay tuition. Page 27.

MARGINALIA

Full text of an item in *Union*, a newsletter at Union Theological Seminary:

"Lunch with the President: President Shriver will not be having lunch in the Refectory on Tues., Mar. 3."

Stop the presses!

■

A memorandum circulated at the University of Montana was entitled "Tarty book returns and weak library policy."

■

From this very newspaper's "Give & Take" column:

"Lee A. Iacocca, who led the campaign to raise more than $200-million to restore the State of Liberty . . ."

It will take more than *that*.

■

From a profile of the president of the University of Northern Iowa in the Waterloo, Iowa, *Area Business Magazine:*

"Jobs precluding his appointment at UNI include: President of Murray State University . . . ; Vice President and Dean of Faculty at West Virginia Institute of Technology . . ."

He got the post anyway?

■

An ad for copy services at the University of Missouri–Kansas City library lists several options, one of which is, "You Do Your Own Coping 7 cents."

We've been doing it for years without charge.

■

From the Adrian College yearbook, the *Mound:*

"President Donald Stanton has been at AC for 8 years, and enjoys his work as Chief Executor of the college."

Who wouldn't?

■

From a book catalogue:

"HOW TO WRITE IN PLAIN ENGLISH By M. L. Stein. A step-by-step guide to writing clearly and effectively that should be within arm's reach of every student, businessperson, and professional who wants to express themselves with clarity and confidence."

Not *too* plain, if you don't mind.

■

Questionnaire in the *Ticker*, a student paper at Bernard M. Baruch College:

"Would you be willing to start school in September and take finals after the holidays? ☐ Yes ☐ No

"Or would you rather start school in September and take finals after the holidays? ☐ Yes ☐ No"

We'd rather start school in September and take finals after the holidays. —C.G.

In Brief

South African's Speech Disrupted at Harvard

Students protesting apartheid forced a South African diplomat to cut short a speech at Harvard University last week.

Duke Kent Brown, a South African vice-consul, had spoken for about 20 minutes when a scuffle broke out between a group of protesters and Conservative Club sponsors of the event. Mr. Brown quickly left the university's Science Center auditorium.

Earlier, about 200 students demonstrated outside the center protesting the speech. Many then went inside and interrupted Mr. Brown with jeers and catcalls. No arrests were made.

However, in a statement condemning the disruption, A. Michael Spence, dean of the faculty of arts and sciences, raised the possibility of disciplinary actions against the students involved.

Regent Leaps to Death from Michigan Tower

A regent at the University of Michigan, Sarah Goddard Power, apparently committed suicide last week by leaping from the eighth floor of Burton Memorial Tower, a campus landmark.

Ms. Power left no suicide note and her university acquaintances were stunned by the news. In the days before her death, Ms. Power had been involved in talks with students who were protesting low enrollment of blacks and racial tension on the campus.

A family spokesman said there was no evidence that university events had played a role in her death.

Ms. Power lived in Ann Arbor, Mich., with her husband, Philip Power, who owns a chain of suburban Detroit newspapers. She had served since 1974 as one of the university's eight elected regents and was a former Deputy Assistant U.S. Secretary of State.

9 People Hospitalized by Classroom Gas Leak

Six students, two faculty members, and a security officer were hospitalized briefly last week when poisonous boron trifluoride gas was accidentally released in an engineering building at the University of Southern California.

Los Angeles fire department investigators said the eight people had been in a classroom when a connection broke on a container releasing the gas. Paramedics checked 28 other people who had been inside the building.

Peace Corps Recruiters Barred at Antioch

Antioch College has decided not to allow Peace Corps recruiters on the campus because the agency has not provided a written guarantee that it does not discriminate on the basis of sexual preference.

Antioch's president, Alan Guskin, who helped form the Peace Corps in the early 60's, agreed to bar its recruiters after 87 students argued in a petition that the corps did not comply with the college's four-year-old civil-liberties code.

The code requires that organizations "affirm in writing that they do not discriminate against any person because of race, sex, religion, national origin, physical handicap, or sexual preference."

The students said an oral promise by the Peace Corps that it did not discriminate was insufficient.

Jon Saari, an Antioch spokesman, said the action did not mean the college had a conflict with the agency, but rather that Mr. Guskin was trying to "cool things off" on the campus. "It was a very weird situation," Mr. Saari said.

Mr. Saari said the president would try to change the civil-liberties code, which was originally designed to bar military recruiters.

Animal-Rights Group Sues U. of California

An animal-rights group has sued the University of California, charging that research animals are being mistreated in science laboratories on the Berkeley campus.

The suit was filed in a state court by an organization called In Defense of Animals, which asks that conditions in the laboratories be improved. Elliot Katz, a veterinarian and leader of the group, has been active in animal-rights demonstrations on University of California campuses.

A university spokesman denied the charges. He said the laboratories were regularly inspected by federal officials and had been found to meet standards under the U.S. Animal Welfare Act.

College in New York Drops SAT Requirement

Union College in New York has dropped the Scholastic Aptitude Test as a requirement for admission. John S. Morris, the college's president, said the institution would place greater emphasis on applicants' high-school records and would continue to require prospective students to take either the American College Test or the College Board's achievement tests.

In a statement, Mr. Morris said the college had dropped the S.A.T. requirement because the test was "culturally biased." He said women, members of minority groups, and students in the arts generally were victims of that bias.

Anne Grosso, a spokesman for the College Board, said it had long taken the position that the S.A.T. is not biased, but "that it reflects differences within the society in terms of educational preparation."

"Clearly every college and university has to make a decision that is in the best interest of its particular population," Ms. Grosso said. "We respect Union's decision to not require the S.A.T."

Rise Found in Enrollment of Handicapped Students

The proportion of college freshmen with disabilities tripled from 1978-79 to 1985-86, according to a new study.

The study found that 7.4 per cent of all full-time freshmen in 1985 had disabilities, compared with 2.4 per cent in 1978.

A report of the study was released by the HEATH Resource Center of the American Council on Education and the President's Committee on Employment of the Handicapped.

"Colleges by and large are providing extensive support services, and they're doing an excellent job of making the faculty and staff more aware of handicapped issues," said Rhona Hartman, director of HEATH, which stands for "Higher Education and Training for people with Handicaps."

However, Ms. Hartman said that handicapped participation

Revenues and Expenditures of Colleges and Universities, 1984-85

	Public institutions		Private institutions		All institutions	
	1984-85	Per cent of total	1984-85	Per cent of total	1984-85	Per cent of total
Revenues						
Tuition and fees	$8,647,637,000	14.5%	$12,635,691,000	38.7%	$21,283,329,000	23.0%
Appropriations						
Federal	1,349,183,000	2.3%	221,407,000	0.7%	1,570,590,000	1.7%
State	26,065,494,000	43.6%	307,666,000	0.9%	26,373,160,000	28.5%
Local	1,970,829,000	3.3%	2,455,000	—	1,973,284,000	2.1%
Government grants and contracts						
Federal	4,960,635,000	8.3%	4,977,900,000	15.2%	9,938,535,000	10.7%
State	899,923,000	1.5%	309,928,000	1.0%	1,209,851,000	1.3%
Local	207,932,000	0.4%	205,996,000	0.6%	413,927,000	0.5%
Private gifts, grants, and contracts	1,845,606,000	3.1%	3,050,719,000	9.3%	4,896,325,000	5.3%
Endowment income	342,833,000	0.6%	1,753,465,000	5.4%	2,096,298,000	2.3%
Sales and services	11,967,500,000	20.0%	7,734,412,000	23.7%	19,701,912,000	21.3%
Other	1,536,586,000	2.6%	1,478,897,000	4.5%	3,015,483,000	3.3%
Total current-fund revenues	$59,794,159,000	100.0%	$32,678,536,000	100.0%	$92,472,694,000	100.0%
Expenditures						
Instruction	$20,287,410,000	34.8%	$ 8,489,773,000	26.8%	$28,777,183,000	32.0%
Research	5,119,191,000	8.8%	2,432,701,000	7.7%	7,551,892,000	8.4%
Public service	2,316,270,000	4.0%	544,825,000	1.7%	2,861,095,000	3.2%
Libraries	1,557,489,000	2.7%	804,304,000	2.5%	2,361,793,000	2.6%
Other academic support	2,710,209,000	4.6%	1,002,251,000	3.2%	3,712,460,000	4.2%
Student services	2,684,343,000	4.6%	1,493,893,000	4.7%	4,178,236,000	4.6%
Institutional support	5,191,693,000	8.9%	3,395,523,000	10.7%	8,587,216,000	9.5%
Plant operation and maintenance	5,040,869,000	8.6%	2,304,612,000	7.3%	7,345,482,000	8.2%
Scholarships and fellowships	1,374,803,000	2.4%	2,295,551,000	7.3%	3,670,355,000	4.1%
Mandatory transfers	591,269,000	1.0%	424,344,000	1.3%	1,015,613,000	1.1%
Auxiliary enterprises	6,431,577,000	11.0%	3,580,671,000	11.3%	10,012,248,000	11.1%
Hospitals	4,914,560,000	8.4%	3,095,581,000	9.8%	8,010,141,000	8.9%
Other	94,867,000	0.2%	1,772,683,000	5.6%	1,867,550,000	2.1%
Total current-fund expenditures and mandatory transfers	$58,314,550,000	100.0%	$31,636,713,000	100.0%	$89,951,263,000	100.0%

Note: Because of rounding, details may not add up to totals.

SOURCE: CENTER FOR STATISTICS, U.S. DEPARTMENT OF EDUCATION

The Chronicle of Higher Education (ISSN 0009-5982) is published weekly except the last two weeks in August and the last two weeks in December, at 1255 Twenty-Third Street, N.W., Washington, D.C. 20037, on the Friday preceding the issue date. Subscription rate: $50 per year ($51 if bill is to be sent). Second-class postage paid at Washington, D.C., and at additional mailing offices.

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4/9/87 C2175-1 A

THE CHRONICLE
of Higher Education.

ISSN 0009-5982

April 8, 1987 • $1.95
Volume XXXIII, Number 30

News Summary

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Some two dozen states have entered the race for the Superconducting Supercollider. Story on Page 4.

Many instructors are finding teaching in prisons more rewarding than expected. Story on Page 12.

A sociologist who is an expert on coerced behavior has become a frequent expert witness in controversial trials. Story on Page 13.

Several trustees of California State University are dissatisfied with the performance of the system's chancellor. Story on Page 15.

A House committee has approved a bill to provide for educational programs to boost U.S. competitiveness. Story on Page 18.

Harvard Business School will establish a program on ethics and leadership with some $30-million in private gifts. Story on Page 27.

A foundation at Georgia Institute of Technology is entirely student-operated. Story on Page 27.

Deep Springs College is a unique experiment in higher education. Story on Page 30.

The presidents' commission of the N.C.A.A. has offered a small package of recommendations for its June convention. Story on Page 35.

Several universities are investigating allegations that some of their football players received money from agents. Story on Page 35.

Student leaders in France, an inspiration to activists in other European countries, are having trouble sustaining the momentum of their own protest movement. See Page 39.

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ACCESS TO CAMPUS LIMITED

South African Military Occupies a Black University for 10 Months in Apparent Effort to Crush Activism

By ROBERT L. JACOBSON

Military forces have been occupying the University of the North, a black institution in the northern Transvaal province of South Africa, for nearly 10 months in an apparently coordinated effort by national, local, and campus authorities to crush student activism and political resistance there, *The Chronicle* has learned.

According to people who have had contact with the 4,500-student institution in recent weeks, a strong military presence has rigidly controlled access to the campus ever since the government of P. W. Botha imposed a sweeping state of emergency in South Africa last June 12.

ZIMBABWE
BOTSWANA
NAMIBIA
University of the North
Pretoria
Johannesburg
SOUTH AFRICA
LESOTHO
TRANSKEI

The University of the North, informally known as Turfloop, was established by the South African government as a separate institution for Sotho- and Venda-speaking blacks in 1959. It is located in a remote part of Lebowa, a black homeland that has not assumed "independence" under the nation's racial policy of apartheid.

Little information about events at the university has been reported by South African news media since last June because of stringent censorship under the state of emergency—although word-of-mouth reports have made the institution the subject of frequent rumors and private discussions.

Militant Students Removed

Accounts obtained by *The Chronicle* indicate that the military presence on the campus is as great now as it was at the outset, and that the Lebowa police have been working with national security forces to remove militant students and quell dissent. Campus officials are believed to have cooperated at least tacitly in the operation.

The occupation seems to have been

Continued on Page 40, Column 1

U.S., France End Dispute over AIDS Virus; Testing of Vaccines Poses Ethical Dilemmas

By DAVID L. WHEELER

Vaccines

BETHESDA, MD.

With a handful of applications for permission to try out a vaccine already in the bureaucratic pipeline, researchers are lifting their sights from the microscopic AIDS virus to a larger set of technical and ethical issues.

Perhaps the thorniest of the new questions is, Whom should scientists seek out as subjects for vaccine tests? Should it be those who appear likely to get the disease, such as prostitutes, intravenous drug abusers, promiscuous homosexuals, and the spouses of infected persons? Or should it be those who appear unlikely to get the disease, such as monogamous heterosexuals? And, vaccine developers wonder,

Continued on Page 9, Column 1

U.S., France

WASHINGTON

President Reagan and France's Prime Minister Jacques Chirac announced last week that a bitter scientific dispute between French and American researchers over credit for the discovery of the AIDS virus and subsequent patent rights had been resolved.

The researchers, Robert C. Gallo, chief of the tumor-cell biology laboratory at the National Cancer Institute, and Luc Montagnier, chief of the virology department at the Pasteur Institute, and their respective governments, agreed to share the patent for kits that test for antibodies to the AIDS virus. The test is used by blood banks and AIDS researchers in laboratories around

Continued on Page 8, Column 1

Faculty Pay Up 5.9 Pct. to $35,470; Best Rise in 15 Years, AAUP Says

By SCOTT HELLER

WASHINGTON

The average college professor earns $35,470, 5.9 per cent more than last year, the American Association of University Professors has reported. Taking inflation into account, real salary levels rose 3.9 per cent in 1986-87, the best increase in more than 15 years, the association said.

In surveying more than 1,900 institutions for its annual report on the economic status of the profession, the A.A.U.P. found continuing signs of "salary compression." Assistant professors who continued to work at the same institutions were getting bigger raises than full and associate professors, the report indicated.

Hirschel Kasper, professor of econom-

Continued on Page 16, Column 1

Powerful Lieutenant Governor Helps Texas Colleges Avert Massive Fund Cuts

By SCOTT JASCHIK

AUSTIN, TEX.

"Every single day, I thank the Lord for Bill Hobby." So says Stanton C. Calvert, chief lobbyist for Texas's community colleges. Just about everybody else connected with Texas higher education agrees.

William P. Hobby, Jr., Texas's Lieutenant Governor, is considered to be the single most powerful official in the state. Unlike his colleagues in the other state capitals, who are generally considered to be the Rodney Dangerfields of state government, Mr. Hobby has more control over the development of the state budget than any other person—even the Governor.

Texans are locked in a major political battle over how much money to spend on higher education. Story on Page 21.

For college officials, Lieutenant Governor Hobby's support has been one of the few sources of support in very difficult times. Time and again in the past few years, they say, he engineered legislative compromises that have saved colleges from losing millions of dollars in state support.

This year, in what most college officials say is a critical legislative session for higher education, Mr. Hobby is again the focus of their hope.

Gerald W. Hill, vice-chancellor for government relations of the University of Texas System, says, "It's impossible to overstate how important Bill Hobby has been to higher education. When you think he has already taken the best possible position, he strengthens it even more."

The Lieutenant Governor's power in Texas comes in large part from control of the state Senate. Mr. Hobby appoints the Senators to committees, selects the chair-

Continued on Page 19, Column 1

College Bias Study Issued; Other Reports Altered

The Education Department released a report on college desegregation in 10 states, even as it admitted other civil-rights documents had been backdated. Stories on Page 18.

Footnotes

The sexual scandal and internal warfare among America's television evangelists may make great theater.

But the dénouement, says a sociologist who is an expert on American evangelicalism, will not be the disintegration of a religious movement that is some 40 million strong in this country alone.

When the TV preacher Jim Bakker resigned the leadership of the PTL ministry three weeks ago following a public confession of adultery and blackmail payments, many commentators predicted the beginning of the end for evangelicalism in the United States.

"I think that's totally wrong," says James Davison Hunter, an assistant professor of sociology at the University of Virginia and the author of *Evangelicalism: The Coming Generation*, to be published this month by the University of Chicago Press.

"Evangelicals" is an umbrella term for theologically conservative Protestants. For his forthcoming book, Mr. Hunter surveyed students at 16 evangelical colleges and seminaries and drew on a wide range of data about the movement at large, to try to draw a picture of what the future elites of evangelicalism were like.

In his interviews with students, he says, he found that many of them were put off by the Moral Majority and embarrassed by the Rev. Jerry Falwell, and believed it was illegitimate for him and his fellow TV preachers to claim to speak for the larger evangelical movement.

"Most evangelicals," Mr. Hunter says, "feel that many of the television evangelists, and Jim and Tammy Faye Bakker in particular, test the limits of credibility."

•

Saul Kit, a biochemical virologist at the Baylor College of Medicine, has won a Distinguished Inventor award from Intellectual Property Owners, Inc., for his work in developing a genetically engineered vaccine for pseudorabies, a kind of herpes that attacks hogs.

A field test of the vaccine on a Texas farm triggered a national controversy last year (*The Chronicle*, October 8, 1986). Mr. Kit developed the vaccine with his son, Malon Kit, an adjunct professor at Baylor, who received the same award from the non-profit association. The group represents people who hold copyrights, patents, and trademarks.

Amar G. Bose, a professor of electrical engineering at the Massachusetts Institute of Technology, and his former student, William R. Short, shared the group's 1987 Inventor of the Year award. Mr. Bose and Mr. Short were honored for inventing the Bose Acoustic Wave Music System.

Abe Widra, associate professor of microbiology at the medical school at the University of Illinois at Chicago, also won a Distinguished Inventor award for his invention of a kind of synthetic skin.

Scholarship

States Spend Millions in Stiff Competition to Provide Site for Proposed Supercollider

$4.4-billion, 52-mile circular accelerator would be most expensive federal science project ever

By KIM McDONALD

WASHINGTON

Prodded by leaders of business and higher education, about two dozen states have declared their intention to enter the race to win the largest and most expensive federal science project ever proposed—a $4.4-billion, 52-mile circular particle accelerator known as the Superconducting Supercollider.

With promises of creating as many as 4,500 new jobs, attracting new high-technology ventures, and bringing in billions of dollars in revenues, the supercollider is considered a major plum by many state legislatures and governors, who are convinced they can win the political battle for it.

The race officially began last week, when the Energy Department issued a formal invitation for bids. But in many respects the competition was already well under way.

Half a dozen states have spent a year or more working on their proposals, and many more have been lured into risking large sums of money just to stay in the running.

"A lot of states are going to end up with egg on their faces when this is over," said George Ormiston, associate director of Nevada's commission on economic development, who is developing his state's proposal. "Only one state is going to end up with the supercollider."

14 Decide Against Direct Bids

According to a state-by-state survey by *The Chronicle*, at least a dozen states are gearing up to spend millions of dollars for geological surveys, environmental reviews, political lobbying efforts, and other services that are considered necessary for a successful bid.

As many as 13 states, concerned about the cost of entering the competition and the risk that Congress may never approve the supercollider because of its high price tag, remain on the sidelines, undecided over whether to throw their hats into the ring.

Fourteen states have decided against bidding directly for the project, but many of them, the survey found, are discussing agreements that would allow them to enter the race through regional coalitions or by lending their political or financial support to another state's proposal.

"This is a competition that is unrivaled in the history of our country," said Christopher Coburn, science-and-technology adviser to the Governor of Ohio. "The S.S.C. is a prize that goes beyond money, new jobs, and economic revival. The state that gets this will become the centerpiece of the commitment of the United States to improving its scientific and technical competitiveness into the next century."

With 10,000 superconducting magnets accelerating matter to nearly the speed of light, the supercollider would be 20 times more powerful than the largest particle accelerator in existence—the Tevatron Collider at the Fermi National Accelerator Laboratory in Batavia, Ill.

Beams of protons would travel in opposite directions around the supercollider's 52-mile oval tunnel, then collide in gigantic explosions out of which massive particles are expected to emerge, carrying secrets of the universe.

High-energy physicists say the supercollider will not only assure U.S. leadership in their frontier scientific field, but also produce technological spinoffs that will improve the country's economic competitiveness in world markets.

To politicians, however, particularly those from economically depressed regions of the country, the main attractions are the thousands of jobs and billions of dollars that the supercollider will generate.

A study done for California's S.S.C. task force by the graduate management school at the University of California at Los Angeles estimated that the winning state would reap 177,000 permanent jobs and $8-billion from 1988 to the year 2000.

Governors and lieutenant governors of the leading contenders in the supercollider competition view the project as so important that many of them will travel to Washington this week to plead for Congressional approval at a series of hearings scheduled in the Senate and House of Representatives.

4 States Thought to Be in Lead

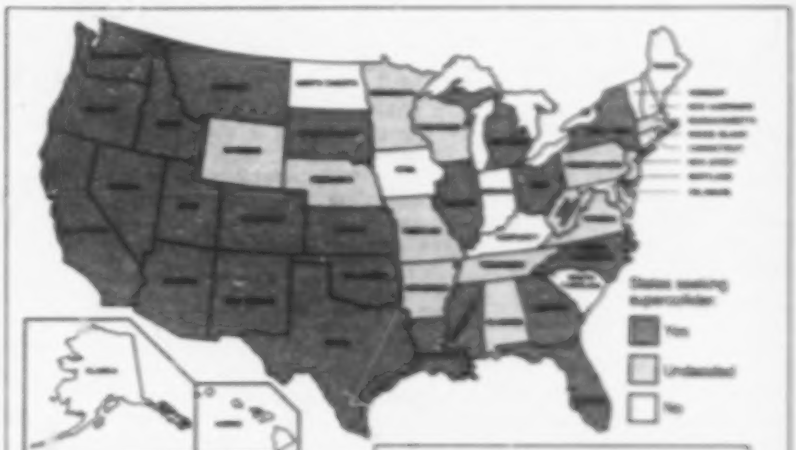
California, Colorado, Illinois, and Texas, which have been developing their proposals for several years in anticipation that President Reagan would give the supercollider his blessing, are considered to be the early leaders in the competition.

Other states that have officially announced plans to send proposals to the Department of Energy, which will manage the supercollider and make the final decision on its location, are Arizona, Florida, Georgia, Idaho, Kansas, Louisiana, Michigan, Mississippi, Montana, Nevada, New Mexico, New York, North Carolina, Ohio, Oklahoma, Oregon, South Dakota, Utah, and Washington.

In announcing Mr. Reagan's decision in February to complete the supercollider by 1996, Energy Secretary John S. Herrington noted that the process for the selection of the site by 1989 was "designed to be fair, equitable to all parties—absolutely open and above board."

States planning to submit bids, he said, would have to demonstrate that their proposed site met the necessary geological, climate, seismic-safety, and other criteria that are necessary for the construction and operation of the supercollider. The criteria were outlined in a 77-page invitation sent to prospective applicants last week by the Energy Department's Office of Energy Research.

Bids that meet those qualifications would then be reviewed by a committee of the National Academies of Science and



What States May Spend to Win the Supercollider

Arizona	$2.5-million
California	$2.5-million
Colorado	$2-million
Florida	$1.6-million
Georgia	$25,000
Idaho	$400,000
Illinois	$4.5-million
Kansas	Amount not specified
Louisiana	Amount not specified
Michigan	$500,000
Mississippi	As much as $1-million
Montana	$1-million
Nevada	[illegible]
New Mexico	$850,000
New York	$1.5-million
North Carolina	$1.15-million
Ohio	$2.5-million
Oklahoma	Amount not specified
Oregon	$750,000 to $1-million
South Dakota	More than $1-million
Texas	More than $1-million
Utah	$1-million
Washington	$460,000

SOURCE: CHRONICLE SURVEY

Engineering. The panel would recommend the best-qualified sites by December, and by January 1989, following an exhaustive environmental review of the Energy Department's preferred site, the Energy Secretary would select and announce the winner.

While Mr. Herrington denied that his timetable would provide an advantage to states that are well along in their proposals, some representatives of regions that have only recently entered the competition are expected to ask lawmakers at the Congressional hearings this week to put off the deadline, now set for August 3, to allow them time to develop competitive proposals.

Loss of Momentum Feared

"I don't see how you can put together a proposal that early," said one official working on his state's supercollider bid. "You've got to have time to get the drilling permits to survey all the potential sites."

Many proponents of the supercollider, however, worry that such a delay could destroy the momentum developing in Congress to approve the project. It may also allow Mr. Reagan's successor in the White House to reconsider the government's commitment to build the device. With some estimates placing the cost at $6-billion to $8-billion, a number of lawmakers have already expressed concern about whether the country can afford to begin construction.

Hoping to counter such opposition, governors, university presidents, business leaders, Congressmen, and scientists are expected to try to persuade subcommittees of the House Science, Space, and Technology Committee and the Senate Energy and Natural Resources Committee in this week's hearings that the new accelerator is well worth the cost.

C. William Fischer, vice-president for budget and finance at the University of Colorado, said a group of Western state representatives meeting in Boulder several weeks ago had agreed to work together to demonstrate at the hearings that the supercollider was necessary to advance the country's scientific leadership and technological competitiveness.

Advisers Meeting this Week

"We quickly came to the conclusion that you can't have a foot race without a prize," he said.

A group of governors' science-and-technology advisers meeting in Washington this week to discuss the supercollider's site-selection process may also try to persuade Congress to approve the project.

In the hope that one of them will become the beneficiary of the prize, representatives of the Western states will meet again at the University of Utah in the first week in May to discuss the possible formation of a coalition that would throw their collective political support to any member of their group that reaches the finals.

"If it's located in the high-plains region," said Mr. Fischer, "the benefits would flow to more than one state."

Although Mr. Herrington said his selection process would not favor states that wage the most visible or expensive political campaigns, state and university officials acknowledge that politics will play a major role in the selection.

Most of the leading contenders have obtained the support of powerful political figures and the services of Washington lobbyists who are being paid as much as $300,000 a year to represent their clients, according to several sources.

California, Colorado, Illinois, and Texas

Continued on Following Page

RESEARCH NOTES

New Material Developed by Michigan Researchers Achieves Superconductivity at 240 Degrees Kelvin

Scientists at Wayne State University and at the Ford Motor Company's research laboratory in Dearborn, Mich., have developed a material that they say loses all resistance to electricity at minus 27 degrees Fahrenheit, or 240 degrees on the Kelvin temperature scale.

Physicists say the achievement, if it is confirmed, represents a major step in the race to develop materials that exhibit superconductivity—the property of losing all electrical resistance—at temperatures that allow a variety of low-cost applications in the computer, transportation, power, and communications industries.

J. T. Chen and Lowell E. Wenger, of Wayne State, and Eleftherios M. Logothetis, of the Ford Motor Company said they had found a "240-degree-Kelvin superconducting phase" within an yttrium-barium-copper oxide material that becomes superconducting at 90 degrees Kelvin.

Because the scientists could not verify superconductivity with conventional techniques, researchers say their findings are not conclusive.

"I don't think it can be considered absolute proof of superconductivity, but rather good indications that it exists," said William I. Glaberson, a professor of physics at Rutgers University who also manages the National Science Foundation's low-temperature-physics program.

Scientists at the University of Houston and the University of Alabama at Huntsville reported several months ago that they had found strong indications of superconductivity at 240 degrees Kelvin in a similar yttrium-barium-copper oxide compound. Until the Wayne State announcement, superconductivity had been verified in materials at about 100 degrees Kelvin—minus 280 degrees Fahrenheit.

Measurement of Atom Life Span Contradicts Standard Theory

Measurements of the life span of an atom known as a positronium contradict the long-standing theory of quantum electrodynamics, which describes the interaction of electromagnetic radiation and electrically charged matter.

Arthur Rich, a professor of physics at the University of Michigan, and colleagues write in the March 30 issue of the journal *Physical Review Letters* that a series of laboratory measurements they took of the positronium indicated that it has a 0.2-per-cent shorter life span than the theory predicts.

"It's the kind of discovery that might be explained away in a couple of months," Mr. Rich said, "or it could open new doors or lead to new ways of thinking about things."

The beginnings of quantum electrodynamic theory were set down shortly after the foundations of quantum mechanics were laid in 1925, but it wasn't until 1947 that the theory was elaborated extensively enough to be useful to scientists.

It has been used since then extensively and successfully to predict the electromagnetic interactions of atomic particles.

The positronium, an atom that exists for a millionth of a second or so, unites a negatively charged electron with a positively charged positron, which is created by radioactive sources. The Michigan researchers measured the positronium's life span in three settings: powder, gas, and vacuum. In each setting, but particularly in a gas, results differ from what the theory predicts.

Mayan Artifacts Found at Honduran Site

Archaeologists working at the Mayan city of Copan in western Honduras have found a cache of jade and flint artifacts that they believe are culturally important and exceptional examples of Mayan craftsmanship.

A Princeton University sophomore, David Stuart, found the artifacts under an altar at the bottom of a temple stairway, which has the history of Copan written in hieroglyphics on its steps and sides. Mr. Stuart and William L. Fash, an assistant professor of anthropology at Northern Illinois University and head of the scientific team at the site, believe the artifacts were used 1,231 years ago at the temple's dedication. (Archaelogists' knowledge of the Mayan calendar makes it possible for them to date such events exactly.)

The artifacts include three flint lance heads, each with seven faces carved on it; two large jade carvings; stingray spines used in ceremonial bloodletting; a 13-inch lance, which may have been used for a sacrifice; and a spiny oyster shell on which may have been placed the still-beating heart of a sacrificial victim.

Cecil H. Brown, professor and chairman of anthropology at Northern Illinois, said the jade carvings found at the site were heirlooms passed down through generations of kings, and their use in the dedication indicates the desperation of the king who was trying to consolidate his power by building the temple.

The artifacts under the altar were tied symbolically to sculptures on the outside of the temple, which was shaped like a pyramid.

The discovery was made last month and was announced by Northern Illinois University and the National Geographic Society.

HONDURAN INSTITUTE OF ANTHROPOLOGY AND HISTORY

This large jade carving was among the artifacts found at an archaeological site at the Mayan city of Copan.

Neutrinos Said to Constitute Less than Half the Universe

Measurements of elusive subatomic particles known as neutrinos that recently bombarded the earth from a nearby exploding star indicate that neutrinos are not massive enough to form the major component of the universe.

Some astrophysicists, who have deduced from the unusual movement of galaxies that as much as 90 per cent of the matter in the universe is not visible, have speculated that large numbers of neutrinos, which are suspected to have a minuscule mass, may be the primary source of this missing matter.

But calculations by John N. Bahcall of the Institute for Advanced Study in Princeton, N.J., and Sheldon L. Glashow of Harvard University indicate that neutrinos could, at best, account for less than half of the missing mass.

The two physicists reported in the April 1 issue of the British journal *Nature* that data gathered by a neutrino detector in Kamioka, Japan, in late February suggested that neutrinos have a mass no greater than 11 electron volts. A proton has a mass of slightly less than a billion electron volts, while the mass of an electron is slightly more than half a million electron volts.

"At the very best, electron neutrinos could be less than half of the missing mass," said Mr. Bahcall in a telephone interview. "They could even be less than 10 per cent."

Scientists Use Lasers and Dye to Cure Cancer in Mice

Medical researchers want to try treating human skin cancer with lasers and a fluorescent dye that collects in the cancer cells and absorbs the laser light.

Romaine E. Saxton, an associate professor of surgery at the University of California at Los Angeles medical center, reported at a meeting of the Federation of American Societies for Experimental Biology last week that the laser-and-dye method had already proved effective in killing skin-cancer tumors in mice. The tumors were created in the mice with cells from a kind of human skin cancer known as melanoma. Mr. Saxton said he and his colleagues would apply to the Food and Drug Administration for permission to use the method experimentally on humans.

Mr. Saxton said the method might be applied to other cancers, using fiber optics to thread laser light to tumors inside

Continued on Page 8, Column 4

Scientists Debate Troublesome Issue of Using Severed Animal Heads in Research

WASHINGTON

Does a severed animal head feel pain?

That gruesome question is at the center of a debate among brain researchers and other scientists over the practice of decapitating animals—usually rats, mice, or rabbits—to study their tissues.

Many scientists once believed, and some still believe, that decapitating animals is a quick and humane way to sacrifice them for scientific study. The decapitations have often been done without anesthesia because using it may alter the biochemistry of tissues that scientists want to study.

Last year, however, an American Veterinary Medical Association panel on euthanasia said the animals might not lose consciousness immediately, and that the technique should be used only if the animal has been sedated or anesthetized, or if the head is frozen in liquid nitrogen immediately after severing.

That recommendation is, one researcher said, "the closest thing we have to national policy."

Many researchers, particularly neurobiologists, have complained to the veterinary association about the recommendation, and it has been the subject of much discussion in scientific societies, most recently at last week's meeting of the Federation of American Societies for Experimental Biology.

Fresh Tissues Preferred

Edward R. Ames, director of scientific activities for the veterinary association and the staff coordinator for the euthanasia report, said researchers "don't like the recommendation because it makes their research difficult.

"They want fresh tissues," he said, "and decapitation, though it may not be easy for the technician who has to do it, is quick and easy for the investigator."

The recommendation regarding decapitation, part of a larger report on ways of inducing painless death in animals, was intended in part as a guideline for animal-research review boards.

The panel recommendation cited one study done over a decade ago by William R. Klemm, now a professor of veterinary anatomy at Texas A&M University, who attached electrodes to the heads of rats shortly before decapitation and found that, after decapitation, the brains gave off short, rapid brain waves similar to those exhibited by rats thought to be in pain. The brain-wave patterns of the severed heads that Mr. Klemm studied lasted for an average of 13.5 seconds.

The study, Mr. Klemm said last week, "lay dead in the literature for about a dozen years, and even I lost interest in it." Then last year the euthanasia panel revived it, and Mr. Klemm noted that more recent studies had confirmed his results.

But, like some other researchers, he is not happy with the panel recommendations.

"If you're trying to do anatomical studies," he says, "freezing messes everything up. It would put a lot of us out of business if we had to adhere to those guidelines."

Fear Public Reaction

Research must be done to find a way to decapitate animals with a minimum of pain but without contaminating or altering tissue, Mr. Klemm believes. He has a research proposal before the National Institutes of Health to search for such a method.

Mr. Klemm said many scientists are against such a study because they fear that research on animal pain would only draw attention to an issue already causing public criticism of scientists. Others, he said, don't want to put money into research that seeks only to refine research techniques.

Many Are Concerned

Many scientists, he said, are concerned about minimizing animal pain, even though they believe it is occasionally necessary for "the advancement of human health and welfare." Mr. Klemm said that, when he put up a poster about decapitation at last week's meeting of the experimental-biology federation, about 450 people showed up over the course of a morning to talk to him.

The veterinary association's Mr. Ames said that, if scientists would "put a fraction of the energy into doing research [on decapitation] that they do into discussing the recommendation, we'd probably have an answer for this problem by now." —DAVID L. WHEELER

States Spend Millions in Competition for Superconducting Supercollider

Continued from Preceding Page

are among the states that reportedly have already signed high-priced lobbyists, while Ohio is among those now negotiating contracts with Washington firms. Lobbyists see the high-stakes competition for the supercollider as a lucrative business and are drumming up as much work as they can.

"We're being deluged with letters and phone calls," said Richard Tremblay, S.S.C. coordinator for Idaho's Department of Commerce.

Powerful political figures are also being asked to take charge of supercollider commissions, task forces, and coalitions in each state.

California's effort is headed by Clair Burgener, an ex-Congressman and former state Republican chairman, while Arizona's is being managed by Sam Steiger, a former Congressman who is a special assistant to the governor.

The first political battle among competitors could start this week. At issue is the Energy Department's decision to favor proposals that offer to reduce the federal government's cost in building the supercollider.

While each state must be prepared to provide 16,000 acres of land for the supercollider at no cost, some plan to "sweeten" their proposals with offers of free electricity, water, labor, outright cash, and other inducements to gain an advantage over their competitors.

"What we can offer is only limited by our creativity," said Colleen Murphy, director of the Colorado S.S.C. Project.

Concerns of Smaller States

Colorado, like many other states, is putting together an "incentive task force" just for that purpose, Ms. Murphy said, and some of the incentives "could include endowed chairs, multipurpose buildings, and tuition breaks for families."

Representatives of smaller states and financially strapped regions, however, say consideration of those incentives would be unfair. Some may ask Congress this week to change that part of the selection process, arguing that it would provide an insurmountable advantage to larger and more economically powerful regions.

"A lot of people are buzzing about this," said one state official who asked not to be named. "Why have the states fight amongst themselves to pick up the tab, if this is a national priority? The next time a military base is proposed, will the states have to come up with the money to buy an F-14?"

Fears of a Bidding War

Most proponents of the supercollider, however, believe that some cost-sharing is needed to make the huge federal contribution palatable to Congress. But those planning to submit proposals are worried that giving a lot of weight to sweeteners could lead to an all-out bidding war, with the prize going not to the most qualified, but to the highest spender.

Whatever deals are cut this summer when the states submit their proposals, the process is expected to look more like a high-stakes poker game than a public auction. Many state officials have already anted up millions of dollars for their proposals and gathered pledges of support from state legislatures and business leaders to raise their wagers should they reach the final round. Throughout the process, they are generally playing their cards close to their chests.

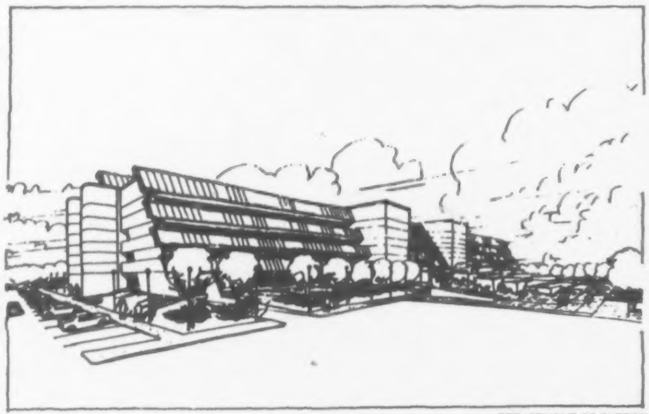
> "The S.S.C. is a prize that goes beyond money, new jobs, and economic revival."

Louisiana and a number of other states bidding for the supercollider, for instance, refuse to disclose publicly any specifics of their proposals, contending that the information could be used by their competitors.

"We would lose our competitive advantage," argued Kay Jackson, Louisiana's secretary of commerce, who is drafting her state's proposal.

But while information about sweeteners remains closely guarded, state officials are generally more than willing to extol the virtues of the sites they have selected.

Illinois has picked an area near Batavia so that the Fermilab accelerator could serve as the proton "injector" to the supercollider, a move officials there estimated would save the federal government $500-million in construction costs.



DEPARTMENT OF ENERGY

An artist's conception of the central laboratory building for the proposed Superconducting Supercollider.

Not only is the site adjacent to a large concentration of accelerator scientists and particle physicists, but it is flat, free of seismic hazards, close to a major international airport and a number of leading research institutions, and well supplied with electrical power.

California, where the main drawback is earthquakes, has selected a seismically safe rural area near Stockton that offers a moderate year-round climate and is close to physics research centers in the San Francisco Bay area and a large number of high-technology companies in Silicon Valley.

"It has all of the things to make this thing go, all of the amenities," said Jesse D. Shaw, a University of California administrator.

Idaho's Cheap Electricity

Idaho, meanwhile, has picked a site near the Idaho National Engineering Laboratory that would allow the state to take advantage of cheap electricity, federal land into which tunnels can be dug at little cost, and 10,000 technicians and scientists who now live there.

"If we can save half a billion dollars or more on construction and $50-million or more annually in operation expenses, we'd have a good shot at it," said Mr. Tremblay, Idaho's S.S.C. coordinator.

Like Idaho, Western states generally regard their pleasant climates and large areas of federal land as their main advantages, while Southern and Midwestern states extol their cheap land, lower living costs, and the large numbers of unemployed workers who are eager to take jobs.

Some states are even pitching the message about the cultural, educational, and recreational benefits of their region in slick pamphlets that resemble travel brochures.

"This is a place where physicists will want to spend their summers," said Joel Cohen, director of policy and research for the Colorado Governor's office.

'God Made Ohio for the SSC'

"People have observed," said Mr. Coburn of Ohio, "that God made Ohio for the S.S.C."

Although Southern, Western, and Midwestern states are scouring their landscapes for potential supercollider sites, New England states are generally uninterested in the competition.

Massachusetts is investigating several potential sites and Gov. John H. Sununu of New Hampshire has held meetings recently with representatives of several New England states to try to persuade them to submit a regional proposal. But most New England officials are not interested in becoming involved in any regional effort.

Other joint proposals may come from North Carolina, South Carolina, Virginia, and West Virginia; Idaho, Oregon, and Washington; Nebraska, North Dakota, and South Dakota; and New York, New Jersey, and Canada (for a site in New York near the Canadian border).

While Energy Department officials will allow more than one proposal from any state, some states are having trouble deciding which of their numerous potential sites to back.

Montana is examining seven sites, and Texas, which will submit proposals for at least two, has nine localities vying for the state's political and economic support.

"Our big objective now is to get on that state proposal," said Charles Bernhard, director of economic development for the Odessa, Tex., chamber of commerce.

Mr. Bernhard noted that winning the supercollider was so important to the four cities in his economically depressed oil region that each had paid $92,000 to prepare a proposal for the Governor's consideration.

Texas Confident

"We can build a site here cheaper than anywhere else in the country," he said. "You can buy the whole dang 11,000 acres here for what you would pay for a city block in Dallas. Because of the oil problems in the state, we also have a lot of machine-shop technicians and oil drillers that are sitting idle here. That's another very strong factor we have going for us here, and it will make the operating costs less expensive."

Texas is so hungry for the supercollider that the Legislature is considering a bill that would authorize $500-million in bonds to use as a sweetener in luring the Energy Department into selecting one of its sites.

"There aren't very many big federal projects that are going on these days," said Dillard S. Hammett, energy adviser to Gov. William P. Clements, Jr. The willingness of the state to throw into its proposals whatever incentives it takes to win the supercollider, he said, is unmatched anywhere else.

"Texas," Mr. Hammett said confidently, "is going to win."

Some other states are also talking pretty tough.

"We'll probably make as many concessions as any other state and probably a lot more," said Mr. Steiger of Arizona. "We are very, very serious about this."

Faculty Pay Up 5.9 Pct. to $35,470; Best Rise in 15 Years, AAUP Says

Continued from Page 1

ics at Oberlin College and author of the report, said the increases reflected college and university efforts "to make the academic profession more attractive for young people."

While he noted the heartening figures, Mr. Kasper pointed out that faculty members had lost purchasing power since 1970.

He said the report of the survey would be titled "Two Steps Forward? . . ." because indications are that inflation is once again going up.

"People who make budgets for the next academic year should take a good hard look at inflation," he said. The A.A.U.P. has estimated a 2-per-cent inflation rate, but Mr. Kasper said it could be as high as 4 or 5 per cent next year.

For all professors, regardless of where they taught last year, average salaries and percentage increases are:

► Full professor: $45,530, up 6.1 per cent.

► Associate professor: $33,820, up 5.8 per cent.

► Assistant professor: $27,920, up 5.7 per cent.

► Instructor: $21,330, up 4.9 per cent.

Gap for Full Professors

Average salaries are up 6 per cent at public institutions, 5.8 per cent at private institutions, and 5.1 per cent at church-related institutions.

Full professors at private colleges earn $50,270, on average, compared to $45,280 for their colleagues at public institutions and $37,620 for those who teach in church-related settings.

At other professorial levels, however, employees of public and private institutions earn about the same, on average.

Professors appointed to non-tenure-track posts are paid significantly less than their counterparts at all types of institutions. The average salary for lecturers ranges from $19,540 at two-year colleges to $26,090 at doctorate-granting institutions.

Full Report to Be Published

The A.A.U.P.'s figures were compiled by Maryse Eymonerie Associates. The salaries are adjusted to a standard nine-month basis.

The full salary report includes additional nationwide averages and salary and fringe benefit figures, as well as comparisons with other professional groups. It will appear in the March-April issue of *Academe*, the association's magazine, which is scheduled to be published in two weeks.

The magazine may be purchased for $25 a copy prepaid from the American Association of University Professors, Suite 500, 1012 Fourteenth Street, N.W., Washington 20005.

Supplementary tables and other data can be ordered from Maryse Eymonerie Associates at P.O. Box 520, McLean, Va. 22101, or by calling (703) 448-8519.

The A.A.U.P. table of average salaries by rank for individual colleges and universities will appear later this month in *The Chronicle*.

Average Faculty Salaries for 1986-87

	Public		Private		Church-related		All	
	Salary	1-year increase	Salary	1-year increase	Salary	1-year increase	Salary	1-year increase
Doctoral institutions								
Professor	$48,740	6.3%	$56,900	5.9%	$51,120	6.1%	$50,500	6.2%
Associate professor	35,590	5.8%	38,820	5.8%	37,440	6.5%	36,210	5.8%
Assistant professor	29,930	5.9%	32,040	6.2%	30,490	5.1%	30,360	5.9%
Instructor	21,440	4.9%	24,890	4.2%	26,260	6.1%	22,130	4.8%
Lecturer	26,060	—	26,650	—	24,310	—	26,090	—
All ranks	38,670	6.1%	44,620	5.9%	39,030	5.7%	39,800	6.0%
Comprehensive institutions								
Professor	$42,290	6.5%	$42,680	6.2%	$39,800	3.9%	$42,160	6.3%
Associate professor	33,340	6.0%	33,140	6.0%	32,130	5.1%	33,200	5.9%
Assistant professor	27,520	5.6%	26,650	6.1%	26,670	4.6%	27,310	5.5%
Instructor	21,640	4.0%	19,070	4.0%	21,180	3.6%	21,220	4.0%
Lecturer	22,470	—	24,210	—	26,530	—	22,790	—
All ranks	34,050	6.1%	33,010	6.0%	32,140	4.5%	33,750	5.9%
Baccalaureate institutions								
Professor	$36,870	3.2%	$40,460	5.5%	$32,480	5.2%	$36,170	4.9%
Associate professor	31,210	4.2%	30,650	5.5%	26,910	5.4%	29,210	5.1%
Assistant professor	25,940	4.3%	24,990	5.9%	22,500	4.8%	24,070	5.0%
Instructor	21,590	4.8%	19,520	4.7%	18,990	6.2%	19,840	5.4%
Lecturer	22,810	—	26,250	—	19,130	—	23,240	—
All ranks	29,660	4.0%	30,780	5.5%	26,170	5.2%	28,480	5.0%
2-year institutions with academic ranks								
Professor	$37,460	6.3%	$27,210	5.6%	$23,890	8.3%	$37,170	6.3%
Associate professor	31,560	6.7%	24,720	6.5%	21,330	6.9%	31,330	6.7%
Assistant professor	26,940	6.8%	20,030	4.9%	19,200	7.0%	26,590	6.7%
Instructor	22,750	7.0%	16,190	4.1%	16,570	6.7%	22,270	6.9%
Lecturer	19,540	—	—	—	—	—	19,540	—
All ranks	30,490	6.6%	21,120	5.3%	20,310	7.3%	30,100	6.6%
2-year institutions without academic ranks								
All	$31,430	3.9%	$20,280	9.1%	$19,830	4.7%	$31,240	3.9%
All institutions except 2-year institutions without academic ranks								
Professor	$45,280	6.3%	$50,270	5.[illegible]%	$37,620	5.1%	$45,530	6.1%
Associate professor	34,170	5.9%	34,910	5.8%	30,090	5.3%	33,820	5.8%
Assistant professor	28,470	5.8%	28,310	6.1%	24,600	4.8%	27,920	5.7%
Instructor	21,180	4.9%	20,440	4.9%	19,900	5.6%	21,330	4.9%
Lecturer	24,730	—	26,410	—	24,060	—	24,930	—
All ranks	35,790	6.0%	37,760	5.8%	29,670	5.1%	35,470	5.9%

— No data reported.
Note: Salary figures are based on 1,875 institutions; percentage increases are based on 1,766 institutions.

SOURCE: AMERICAN ASSOCIATION OF UNIVERSITY PROFESSORS

Pay Study Finds Gap Among Disciplines

Faculty salaries are going up. But a new study indicates that the differences between what professors earn in various disciplines are increasing, too.

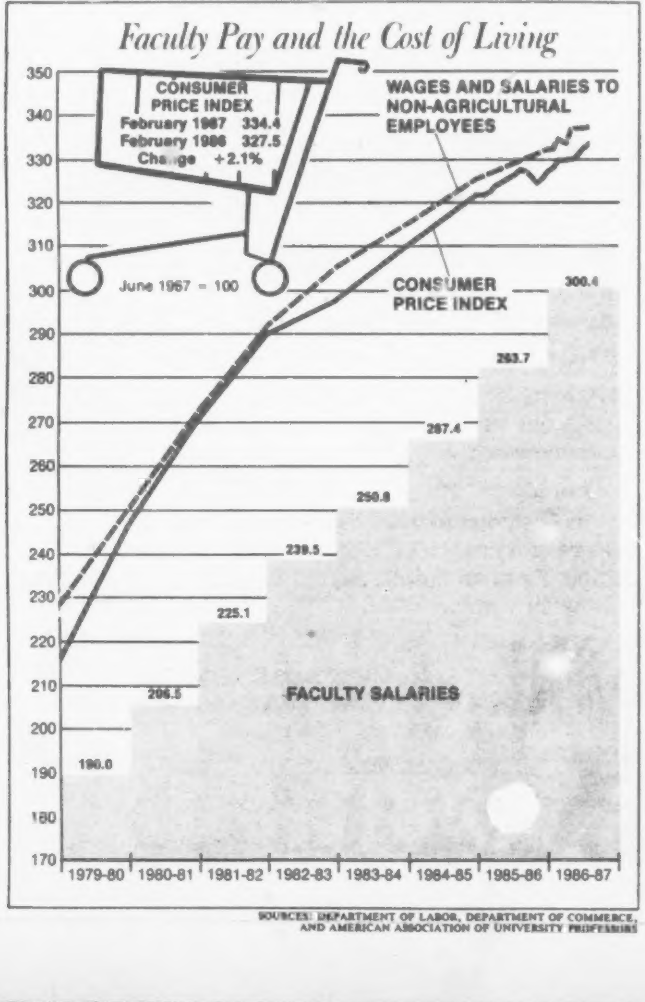
A survey of 80 state colleges and universities, conducted by Oklahoma State University, indicates widespread salary disparities. Professors in computer science and engineering earn $42,080 and $45,216, respectively. In visual arts, the average professor earns $32,185. In the social sciences, the figure is $37,403.

Salary compression is evident in the high-paying fields, as well.

A new assistant professor in business management is hired at $38,017, on average, while a current assistant professor makes $37,374. Similar patterns are apparent in computer science, engineering, and the health sciences.

Copies of the *1986-87 Faculty Salary Survey By Discipline* are available for $25, plus postage, from the Office of Institutional Research, Oklahoma State University, Stillwater, Okla. 74078; (405) 624-6897.

—S.H.



Faculty Pay and the Cost of Living

SOURCES: DEPARTMENT OF LABOR, DEPARTMENT OF COMMERCE, AND AMERICAN ASSOCIATION OF UNIVERSITY PROFESSORS

Northwestern Is Told that It Cannot Force Professor to Shift Lab

EVANSTON, ILL.

An Illinois judge has barred Northwestern University from forcing a medical professor to move his research facilities, saying he would be "irreparably harmed" otherwise.

Judge Harold A. Siegan issued an injunction that forbade the university to move R. Michael Williams from the sterile laboratory facilities in the Northwestern University Cancer Center.

Dr. Williams has done oncology research there since 1979.

The judge ruled that medical-school administrators had made written and oral promises about the facilities when they lured Dr. Williams from Harvard University in 1978.

Dr. Williams also contended that the university had drastically cut his salary and would not allow him to see patients.

Martha P. Mandel, a lawyer for Northwestern, denied the charges and said the university would appeal the injunction.

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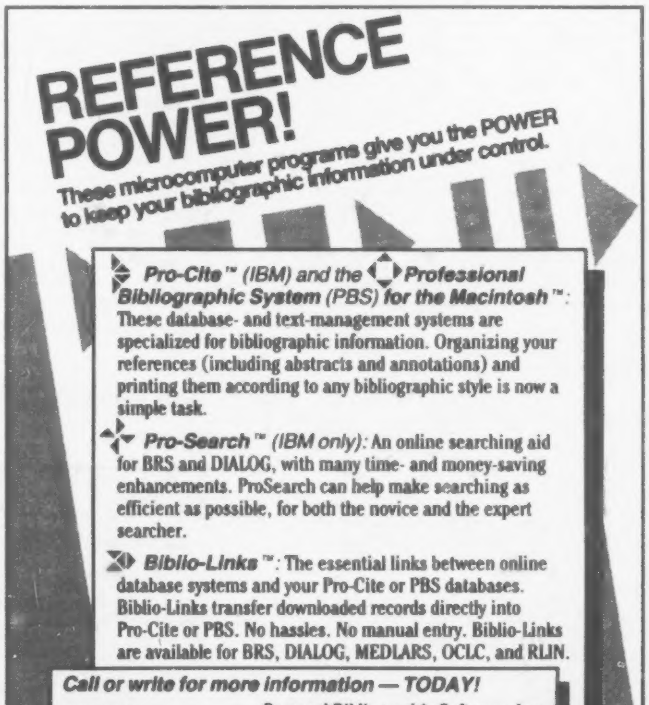

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Deep Springs College: a Utopia in the California Desert

Continued from Preceding Page

then drives to a section of the ranch where the steers are fed. "I had one of those bulls hook me," he says as a dozen steers gather around the back of the flat-bed, chewing at the alfalfa as Mr. Hoover cuts the ties that hold the bales together.

"This always appealed to me romantically," says Mr. Hoover, who chose Deep Springs over "all the liberal-arts cop-out places."

Like other Deep Springers, Mr. Hoover appears concerned most with the politics and metaphysics of ranch work, approaching subjects like truck driving and ditch digging as if they were the touchstones of some all-encompassing philosophy.

"In Washington, you're really in it for yourself, you're not an organic part of things," explains David N. Schisgall, a Maryland native who attended school in the District of Columbia. "Here, when I put in an irrigation ditch, I know it will help grow alfalfa which will feed the cows which will allow me to eat."

On occasion, ranch politics can reach crisis proportions. During a recent visit, students were still smarting from a controversy over an assignment made by the student-labor commissioner, who is charged with divvying up the ranch responsibilities among the students. One student, offended that the labor commissioner had not assigned him to the coveted dairy position, made "unfair charges," Mr. Kehoe recalls.

The student body subsequently voted that the complainant be allowed to "go on dairy, and the labor commissioner resigned on principle," he says. The controversy became the focus of intense debate both during the weekly public-speaking forums and in the "common book," where students write often profanity-riddled screeds on their gripes of the day.

Students were also miffed by the arrival of a machine to replace hay bucking. "It was not without great grief and indignation that the student body relinquished its time-honored tradition of hay bucking to a mechanical-technological monster known as The Harrowbed," Mr. Latt wrote in the fall 1986 issue of the semi-annual *Deep Springs Newsletter*.

Mr. Latt is also disturbed by the lack of self-sufficiency on the campus. Much of the food is brought in from the outside, largely because the college has been unable to grow enough vegetables and fruits. He sees the continuing emphasis on cattle herding at Deep Springs as a philosophical and moral issue, arguing that the college is contributing to the "desert-ification" of America by allowing cattle to destroy all plant life in the area.

"The college would be a better place if we concerned ourselves more with making ourselves self-sufficient," he says. "That's happening slowly, but the trustees still see themselves as gun-totin' cattle herders."

Trustees Painted as Villains

The college trustees are also painted as the villains in *the* major political issue at Deep Springs: the absence of woman students. Every year since 1970, the student body has voted in favor of "co-ed," as they call it. The trustees, who have periodically discussed the issue, remain opposed.

Nonetheless, the admission of women to Deep Springs is "inevitable," literally everybody on the campus agrees; the question is how and when. In the meantime, the issue has provoked some heated debate between the students and the board, derided by one student as an "age-addled gerontocracy."

The lack of women has long been a prickly subject at Deep Springs. It is the source of much discontent, and the reason many students who might otherwise have ventured into the desert decide to go elsewhere.

Mr. Kehoe, who was a student here in the early 50's, tells of a prank some second-year students played on a new recruit. Taking him to the top of a ridge that overlooks the school, they pointed west to what they said was the Eureka Valley Girls School in the next valley over.

The lovelorn freshman began writing love letters addressed to any member of the fairer sex attending the school. The letters were intercepted and answered by the wife of a faculty member. Soon the correspondence became steamy, and the student announced his determination to trek across the desert and over the mountains to commune with his new love.

The tormentors, worried that he would be stranded, finally let him in on the joke. Eureka Valley Girls School was a mirage. The student was not amused, and he left the college soon after. He now works somewhere in Saudi Arabia, Mr. Kehoe says.

Beyond the garden-variety frustrations that come from living in a single-sex environment, some say, are the deeper problems that arise from spending two years in a place that is so different from the world at large.

One of the more curious findings of Mr. Newell's 1980 alumni study is that relatively few Deep Springs graduates have married or borne children. The survey of 300 graduates from the classes of 1917 to 1979 found that 31.8 per cent had no children and that 27.9 per cent were not married. Mr. Newell wrote, "Marrying later, and having fewer children (and having them later), is clearly a national trend, although it seems to be accentuated among former Deep Springers."

Misconceptions About Sex

Sandra Kehoe, a firm supporter of "co-ed," says the single-sex experience at Deep Springs has led students to some serious misconceptions about women.

"Most of their high-school experiences were of cute little girls who were not their intellectual equals," she says, sipping soda water in the Kehoes' living room, flooded with light from the bright, late-afternoon sun. "The absence of young women allows whatever fantasies people come with, whatever myths, to flourish," she adds. "For these people to be armed only with myths is too bad."

When pressed, many students here say they did not have much interaction with women in high school, and some admit that they were not part of the "in" crowd in their home towns. Others echo the words of Mr. Hoover, who says the single-sex life is no problem because he has a "fine woman" back home.

Jeffrey A. Clarke, a second-year student, is opposed to admitting women. "My most important objection is, in a group of students this small, the presence of sexual tension would be devastating."

That is an argument used by many of those who are opposed to co-education or are worried about the problems that would arise from what would be the first major structural change in the college's 70 years.

"The assumption is that if we go co-ed, we'll need professional counselors," Mrs. Kehoe says. "But the romantic and sexual entanglements have always been here. Students get very wrapped up in one another. At least two have thought of leaving because they were victims of broken hearts."

> "The absence of young women allows whatever fantasies people come with to flourish."

For Random D. Turner-Jones, a second-year student and, at 22, an elder statesman of sorts, the single-sex atmosphere has other drawbacks. "The whole concept is kind of neat but kind of repulsive at the same time," he says. "The place is pretty thick with testosterone and male bonding."

The tension that builds up over the seven weeks of each academic term is often released during a week break, when students are allowed to leave the valley and are permitted to drink alcohol on the college grounds. Those who remain are known to engage in practices that faculty members describe as bizarre.

Christof M. Bove, a first-year student, uses the word "ritualistic." "We would start early in the evening drinking tequilas," he says. "Why tequilas? It sounds romantic; we're in the desert. Then we'd go off on our own. Someone would go off and climb to the 'Druid' and see the nose of God," he says, describing a rock formation that has held mythological significance for generations of Deep Springers.

"I would go into the museum [one of the campus buildings] with a jug of wine, turn up the stereo to 10 and just bang the typewriter," he says. "Later we'd come back and tell stories."

Another student describes a different break party. "Once," he says, "we took a cow's head, doused it with gasoline, and set it on fire." Another says he and his friends would drink or take drugs and then go on mad dashes through the desert sagebrush. "We'd try to run as fast as we could without getting killed," he says.

Computers a New Development

The adults at Deep Springs say the break-time wildness has mostly been the province of the first-year class, another sign that life, even at Deep Springs, can change.

"The last class arrived with better clothes, fine stereos, sound equipment, cars, compact disc players that we didn't see four years ago," says Mrs. Kehoe. As recently as a few years ago, such equipment was considered strictly tabco here.

"Four years ago, when Brandt brought a computer and two more were given to the school, people thought Deep Springs is not the right place for a computer," she says. In 1983, the college owned one computer. Today, it has half a dozen for student use.

Yet, for all the changes, the college appears to be locked in a time warp, as manual gas pumps, 50's-vintage trucks, and early-century telephones coexist with Apple computers and compact-disc players.

"The people change and attitudes change, but the place is pretty much the same," Mrs. Kehoe says.

'There's a Lot of Arrogance'

Students at Deep Springs consider themselves an articulate, assured, intelligent group of people. In other words, says Mrs. Donaldson, "there's a lot of arrogance, uninformed arrogance. They don't feel shy about standing on ignorance."

Yet the students lapse into textbook psycho-babble when asked to discuss personal matters, like their relationships with one another. Mr. Bove, who traipses around campus in a Western-preppy outfit that makes him look as if he has emerged from a Ralph Lauren advertisement, assays this explanation: "We're so constructed here that in a sense we don't need a concreteness because our language is so understood. That's one of the most significant drawbacks, that lack of concreteness."

Mr. Pease is more blunt. "Sometimes it's better to say something vague than to just punch somebody out," he says.

Mr. Turner-Jones says the lack of real communication at Deep Springs is largely a product of immaturity.

"Mostly it's the teenage male things like wrestling in the hallway," he says, as he helps Mr. Sterbal attempt to whip together a dinner of sloppy joes and macaroni-and-cheese in a kitchen that looks as if it has just suffered a direct hit from a tornado.

As a result of his time here, Mr. Turner-Jones says, "I have a hard time being able to talk to anybody. You get xenophobic. Women in particular; I was aware of the difference in the way I related to them. When I went to a conference recently, I wasn't sexually awkward, I was just awkward as a person."

'Nothing Can Measure Up'

Whether bringing women to Deep Springs would solve many of these interpersonal problems is another question. Mrs. Donaldson, the literature teacher, believes Deep Springers' problems with the outside world may lie in the very quality of the Deep Springs experience.

"This experience is so intense, magic or mythic, it's almost like nothing can measure up," she says. "They look back on it as their Camelot."

Why is it, she asks, that so many Deep Springs graduates become doctors, lawyers, businessmen, and administrators, and do not enter creative disciplines?

She asks: "My question is, Is that positive or not, to have such an intense experience that you feel you've done the most important thing in your life by age 21?"

Freshman Merit Scholars

Institutions enrolling the most in 1986

This table shows the top 41 colleges and universities attended by freshman Merit Scholars named in 1986. The rankings were determined by *The Chronicle* from an alphabetical listing supplied by the National Merit Scholarship Corporation.

The first column lists the total number of Merit Scholarship winners, while the second column shows the number whose scholarships were paid for by the institution, not by the National Merit Scholarship Corporation or other corporate sponsors.

Over all, 6,026 freshman Merit Scholars were enrolled—3,648 at 232 private institutions and 2,378 at 152 public institutions.

	Number of scholars	Number sponsored by institution
1. Harvard and Radcliffe Colleges	297	—
2. University of Texas at Austin	270	210
3. Yale University	183	—
4. Rice University	176	125
5. Stanford University	172	—
6. Princeton University	140	—
7. Georgia Institute of Technology	130	98
8. Northwestern University	117	75
9. University of Chicago	115	73
10. Texas A&M University at College Station	112	77
11. Massachusetts Institute of Technology	108	—
12. Carleton College	104	81
13. Michigan State University	102	83
14. Duke University	90	7
15. University of California at Los Angeles	83	60
16. University of Michigan	78	—
17. Trinity University	73	65
18. Washington University	72	48
19. University of Minnesota–Twin Cities	71	58
19. Oberlin College	71	57
21. University of Florida	70	61
22. Cornell University	68	—
23. University of California at Berkeley	66	4
24. University of Virginia	62	—
25. Brown University	61	—
26. University of Houston	59	48
27. University of Pennsylvania	57	—
28. Baylor University	56	42
29. Ohio State University at Columbus	55	42
30. Miami University	49	28
31. Harvey Mudd College	47	33
32. Auburn University	46	31
33. Brigham Young University	45	30
33. Dartmouth College	45	—
35. Emory University	43	34
36. University of Illinois at Urbana-Champaign	43	—
37. University of California at Santa Barbara	41	34
38. Williams College	39	—
39. Rose-Hulman Institute of Technology	38	32
40. University of Notre Dame	37	—
41. Case Western Reserve University	35	24
41. University of Miami	35	27

SOURCE: NATIONAL MERIT SCHOLARSHIP CORPORATION

4/21/87 C2175-1

THE CHRONICLE
of Higher Education.

ISSN 0009-5982

April 22, 1987 • $1.95
Volume XXXIII, Number 32

News Summary

Articles on inside pages

A specialist in Russian history is said to be President Reagan's choice to be the next Librarian of Congress. Story on Page 7.

New federal rules will require colleges to make contributions to the pension plans of faculty members who continue to work past retirement age. Story on Page 17.

Public colleges in West Virginia will use interest from special accounts to cover a requested $10.4-million cut. Story on Page 23.

Officials of the Education Department have acknowledged that they paid a company to find examples of college administrators' misuse of funds. Story on Page 23.

The Internal Revenue Service has made several major changes in its proposed rules on lobbying by non-profit groups. Story on Page 31.

Student newspapers say they are increasingly being subjected to censorship. Story on Page 35.

College sports officials seem determined to reduce spending on athletics, two new surveys indicate. Story on Page 39.

The governing council of the N.C.A.A. has proposed only a few rule changes to be considered at the June convention. Story on Page 39.

Recommendations by the World Bank regarding higher education in developing countries have drawn fire from the International Association of Universities. Story on Page 41.

A Palestinian student was killed last week in a clash between Israeli soldiers and student protesters at Bir Zeit University. Story on Page 44.

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EX-CONVICT KILLED N.Y. STUDENT

Court to Decide if Colleges Are Required to Screen Applicants' Criminal Records

By **CHERYL M. FIELDS**

ALBANY, N.Y.

New York's highest court is being urged to overturn a ruling that some colleges contend could make them legally responsible for the conduct of everyone with a prison record—and possibly everyone—they admit.

The case arose from the rape and murder of a female student at the State University of New York College at Buffalo in 1976. The murder, by a student who was an ex-convict, occurred in an off-campus apartment after the semester had ended.

$1.6-Million in Damages

The parents of the student, Rhona Eiseman, charged that the prison system had been negligent in releasing the convict, Larry Campbell, and that the college had been negligent in admitting him. An appellate court awarded the Eisemans about $1.6-million in damages, which would be paid by the state, which operates both institutions, if the decision is upheld.

The case dramatizes some of the conflicting pressures that colleges can face. Since the courts long ago abandoned the legal doctrine that colleges stand *in loco parentis*—in the role of parents—students often want freedom, even in college-owned housing, comparable to that of residents in private apartment buildings. Yet, college administrators note, students and their families may also feel that colleges are responsible for providing an environment safer than that available elsewhere.

Several previous decisions by local and state courts have held colleges responsible, in varying degrees, for the safety of residents in dormitories and in common areas of their campuses—particularly when the courts felt that college officials should have foreseen that problems could occur, or found that college publications

Continued on Page 36, Column 1

U.S. Restrictions on Flow of Money to Cuba Threaten Psychologists' Trip to Conference

By **COLLEEN CORDES**

WASHINGTON

The U.S. Treasury Department has refused to approve a trip to Cuba by a group of psychologists who want to attend an international scientific meeting there this summer.

Citing federal regulations that restrict the flow of U.S. dollars to Cuba, officials rejected the American Psychological Association's argument that all psychologists and behavioral scientists who want to travel to the meeting should be permitted to do so under the principles of scientific freedom.

Department officials said, however, that individual psychologists might be able to qualify for a license to travel to Cuba and should apply for approval on their own.

The psychological association sought approval for all psychologists and behav-

Continued on Page 8, Column 1

Scholars Attempt to Rework Theories of Liberalism

Attacked from the left as elitist and from the right as morally corrupt, liberalism has been retooled for a new political age. Story on Page 6.

Administrators' Pay Up More than 5 Pct. for 2nd Straight Year

Those at private institutions receive the largest increase

By **KATHERINE S. MANGAN**

WASHINGTON

Salaries of college and university administrators increased 5.3 per cent nationwide this year. Employees of private institutions fared better than their colleagues in the public sector.

Over all, administrative salaries in 1986-87 climbed by the same amount as last year, according to a national survey by the College and University Personnel Association.

This year, however, the gap was wider between the increases at private institutions, 6.8 per cent, and those at public institutions, 4.5 per cent.

- Median salaries of administrators appear in a table on Page 18.
- Average faculty salaries at 1,700 colleges are in a table beginning on Page 19.

Last year the increases were much closer, with a 5.3-per-cent jump at public, and a 5.6-per-cent jump at private, institutions.

John M. Toller, personnel director at the University of Connecticut and a co-author of the study, said private institutions might be catching up after some difficult years when they were hit by high inflation.

"It's a balancing factor," he said. "Some of the private colleges have had rough years in relation to inflation, and I think what we're seeing is that they're catching up now."

Public institutions, which have a larger pool of employees, normally are not hit as hard by increases in health-care costs and other employee-related expenses, said Mr. Toller, who also chairs CUPA's classifica-

Continued on Page 18, Column 5

A Headhunter Helps Dartmouth–and Many Others–Find a New President

By **SCOTT HELLER**

James O. Freedman needed one question answered before he would put his name in the running for the Dartmouth College presidency: Would Dartmouth really hire someone without a tie to the college?

The last such president retired in 1828. Happily heading the University of Iowa, Mr. Freedman wasn't sure he wanted to risk his reputation if Dartmouth wasn't serious.

A Growing Cadre

It was the kind of question he couldn't ask members of the search panel. But Mr. Freedman could privately ask William J. Bowen, an executive recruiter hired to direct the search. The guarantee came back: Dartmouth wanted the best person for the job, regardless of background.

Mr. Freedman agreed to meet with members of the search panel in Chicago. Last week—one month later—he was named Dartmouth's 15th president.

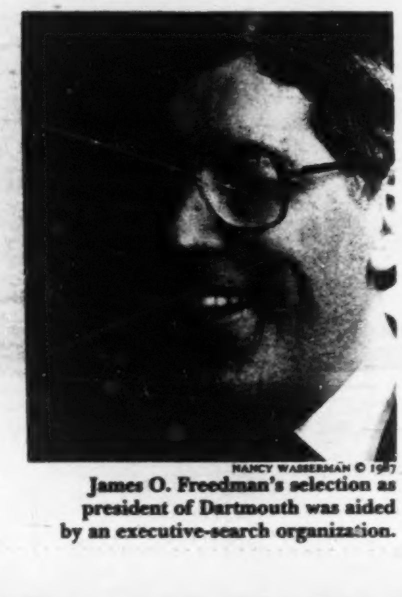
Mr. Bowen was nowhere near Hanover, N.H., when Mr. Freedman addressed the college faculty for the first time. But his role as a "broker" facilitated the move from one presidency to another, Mr. Freedman says.

Mr. Bowen is one of a cadre of headhunters who are quietly changing the style, if not the substance, of how college presidents are selected today.

Presidential searches still take time and include large campuswide committees. But in many places consultants are turning passive selection panels into aggressive academic raiders.

When resignations are announced—and even before—headhunters are on the prowl, phoning for business. Sometimes

Continued on Page 14, Column 2



NANCY WASSERMAN © 1987

James O. Freedman's selection as president of Dartmouth was aided by an executive-search organization.

FACT-FILE

Median Salaries of Administrators, 1986-87

	All institutions	1-year change	Public institutions	Private institutions	All universities	4-year colleges	2-year colleges
Chief executive of a system	$84,959	+ 4.7%	$84,959	$82,236	$98,800	$70,000	$75,000
Chief executive of a single institution	70,000	+ 6.2%	69,875	71,000	85,680	68,865	62,441
Executive vice-president	58,916	+ 4.5%	60,000	55,000	72,100	53,593	53,000
Chief academic officer	54,796	+ 6.4%	58,266	50,000	70,044	51,500	48,695
Chief budget officer	44,527	+ 5.4%	44,979	41,650	48,000	38,964	41,379
Chief business officer	52,000	+ 6.3%	53,800	49,202	66,675	49,488	46,721
Chief development officer	47,092	+ 5.8%	48,072	45,600	58,435	44,000	39,630
Chief development and public-relations officer	54,000	+ 9.3%	55,000	53,141	66,500	51,000	37,022
Chief health-professions officer	67,392	+11.3%	64,400	82,500	104,816	37,800	42,350
Chief personnel and human-resources officer	40,000	+ 6.8%	42,996	34,570	45,600	32,500	39,450
Chief physical-plant officer	38,000	+ 4.5%	40,158	34,000	47,797	33,300	33,208
Chief planning officer	49,000	+ 4.3%	50,500	44,750	56,500	41,750	44,405
Chief planning and budget officer	52,998	+ 5.7%	58,538	46,000	60,000	45,900	47,161
Chief public-relations officer	35,424	+ 6.7%	38,773	31,000	46,867	30,000	31,500
Chief student-affairs officer	45,773	+ 6.1%	50,110	38,430	57,000	39,000	44,691
Administrator, grants and contracts	38,892	+ 2.7%	41,112	35,000	45,000	28,510	34,120
Administrator, hospital medical center	94,700	+12.7%	92,940	100,006	100,000	—	—
Bursar	29,940	+ 9.2%	31,260	27,269	34,971	24,837	27,941
Chaplain	26,200	+ 2.1%	28,113	26,100	31,009	24,700	23,600
Comptroller	40,000	+ 4.9%	42,974	36,040	47,961	34,255	37,333
General counsel	56,442	+ 6.5%	55,650	62,993	58,300	51,100	47,515
Registrar	32,952	+ 6.3%	37,510	28,100	40,308	28,938	32,386
Director, accounting	32,330	+ 7.0%	35,000	28,090	38,500	26,650	30,800
Director, admissions	35,020	+ 4.7%	36,000	33,800	42,400	33,406	31,836
Admissions and financial aid	40,000	+ 6.7%	40,132	39,541	44,870	39,541	35,144
Admissions and registrar	39,853	+ 3.1%	41,128	30,788	46,103	33,072	37,914
Director, affirmative action & equal employment	39,828	+ 7.6%	39,669	39,000	40,250	33,800	39,317
Director, alumni affairs	28,680	+10.3%	32,159	25,116	34,250	24,464	22,500
Director, athletics	40,000	+ 3.6%	44,000	34,655	49,992	34,000	35,904
Men's	—	—	—	—	43,783	28,500	36,000
Women's	—	—	—	—	37,000	24,960	27,600
Director, auxiliary services	40,044	+ 9.0%	41,000	35,600	44,628	33,935	32,315
Director, bookstore	23,256	+ 5.7%	26,365	19,915	31,350	19,750	21,672
Director, campus recreation and intramurals	26,724	+ 1.0%	29,364	22,550	30,500	22,500	21,477
Director, campus security	28,940	+ 5.2%	31,658	25,099	34,475	25,000	26,303
Director, church relations	26,130	—	32,820	25,600	—	25,000	—
Director, community services	35,000	+ 6.9%	36,277	28,220	37,689	27,906	34,879
Director, computer center	40,720	+ 5.4%	44,165	34,775	51,000	34,729	38,173
Academic operations	37,685	+ 2.9%	40,000	35,000	45,096	31,185	33,079
Administrative operations	38,500	+ 6.4%	41,468	35,700	46,675	33,254	34,350
Director, development and alumni affairs	38,713	+ 9.7%	39,650	37,400	50,000	35,352	33,667
Director, educational-media services	31,164	+ 4.8%	34,871	23,880	35,880	24,136	32,892
Director, food services	31,028	+ 3.1%	32,113	30,500	39,068	28,000	25,502
Director, foreign students	28,434	+ 4.2%	29,715	24,872	29,112	23,812	23,345
Director, housing and food services	—	—	46,656	42,400	—	34,920	—
Director, information office	30,000	+ 5.3%	32,376	27,250	36,300	25,603	27,354
Director, information systems	44,736	+ 3.4%	45,337	42,200	50,325	37,656	43,000
Director, institutional research	38,280	+ 5.6%	40,000	33,000	43,680	32,136	36,267
Director, internal audit	38,447	+ 5.9%	38,304	39,000	40,000	31,698	34,215
Director, international studies	—	—	—	—	42,500	31,298	38,851
Director, learning-resources center	34,130	+ 5.1%	37,169	25,000	37,442	25,908	36,876
Director, library services	37,500	+ 5.6%	42,400	32,000	50,000	32,000	33,753
Director, news bureau	27,690	+ 3.2%	29,400	24,000	30,000	23,023	25,215
Director, personnel and affirmative action	33,600	+ 5.7%	34,329	—	38,727	28,875	33,600
Director, publications	29,500	+ 8.1%	32,643	26,028	34,500	24,995	25,596
Director, purchasing	31,497	+ 5.8%	32,550	28,000	35,915	26,500	29,562
Director, risk management and insurance	41,500	+ 9.1%	42,100	41,500	42,800	31,000	33,102
Director, special and deferred gifts	36,000	+ 8.1%	41,000	34,388	41,617	32,400	30,000
Director, student activities	27,214	+ 4.5%	30,992	21,962	31,936	21,480	29,900
Director, student counseling	34,081	+ 2.5%	37,095	28,090	39,003	28,000	35,391
Director, student financial aid	30,899	+ 4.3%	33,463	27,300	37,200	27,300	30,009
Director, student health services							
Physician	61,509	+ 5.0%	63,900	48,495	66,600	40,000	23,210
Nurse	22,300	+ 1.9%	25,793	20,000	25,662	19,500	23,507
Director, student housing	27,900	+ 8.9%	32,832	23,665	34,430	23,300	23,130
Director, student placement	29,264	+ 4.0%	32,098	25,000	34,980	24,570	28,106
Director, student union	32,639	+ 4.9%	36,088	27,288	36,187	26,787	33,495
Dean, architecture	64,500	+ 2.8%	—	61,300	65,749	45,213	—
Dean, agriculture	69,756	+10.0%	69,756	—	71,000	—	43,560
Dean, arts and letters	48,936	+ 2.0%	48,936	42,800	60,960	44,748	40,656
Dean, arts and sciences	57,681	+ 7.5%	57,681	57,024	63,816	51,188	43,470
Dean, business	55,790	+ 7.3%	55,698	55,790	66,300	46,700	42,050
Dean, communications	—	—	—	56,500	65,500	32,400	43,302
Dean, continuing education	44,616	+ 9.4%	45,102	42,000	53,510	39,300	41,425
Dean, dentistry	94,329	+ 7.9%	89,336	96,500	95,748	—	—
Dean, education	55,259	+ 6.3%	58,000	42,200	60,000	41,893	39,181
Dean, engineering	68,496	+ 5.1%	68,900	68,000	76,464	52,000	44,325
Dean, extension	54,430	+ 8.9%	54,430	—	65,500	30,000	41,359
Dean, fine arts	51,151	+ 4.3%	54,564	40,000	60,000	35,250	41,328
Dean, graduate programs	57,680	+ 3.0%	59,600	50,891	60,284	44,944	—
Dean, health-related professions	50,003	+ 3.2%	50,003	55,450	63,000	54,000	40,613
Dean, home economics	—	—	—	33,600	64,500	—	41,228
Dean, humanities	43,500	+ 3.1%	45,874	33,150	57,000	34,731	41,792
Dean, instruction	—	—	—	—	—	—	46,295
Dean, law	89,000	+ 7.2%	86,620	90,000	90,000	41,420	—
Dean, library and information sciences	—	—	—	—	57,043	42,744	44,859
Dean, mathematics	40,750	– 2.9%	41,853	32,000	—	33,075	41,319
Dean, medicine	120,000	+14.3%	109,920	145,000	125,000	—	—
Dean, music	55,640	+ 6.0%	62,250	47,500	64,000	44,056	46,446
Dean, nursing	50,000	+ 5.5%	53,457	43,990	60,000	39,400	38,167
Dean, pharmacy	70,828	+ 3.4%	76,309	66,000	71,508	—	—
Dean, sciences	48,168	+ 4.0%	49,658	35,435	62,974	37,440	41,738
Dean, social sciences	42,400	– 1.2%	44,750	31,183	57,700	31,900	42,540
Dean, social work	63,305	+ 0.8%	66,096	55,000	66,800	41,600	—
Dean, special programs	—	—	—	35,738	—	36,800	37,840
Dean, undergraduate programs	—	—	—	—	56,500	48,400	46,300
Dean, vocational education	45,000	+ 5.9%	45,000	—	56,604	46,650	43,480

— No data

Note: The results are based on a national sample of 3,190 colleges and universities. The rate of response to the survey was 51 per cent. The figures are intended only to give a broad overview of salaries.

SOURCE: COLLEGE AND UNIVERSITY PERSONNEL ASSOCIATION

Administrators' Pay Up More than 5 Pct. for 2nd Year in Row

Continued from Page 1

tion and direct-compensation council.

A 10-year review of the survey results found that administrators' earning power had dipped over time.

In the last decade, the Consumer Price Index rose 80.4 per cent, while salaries at public institutions grew by 74.6 per cent. At private institutions, salaries are up 80 per cent over those of 10 years ago.

In academic 1986-87, administrators stayed well ahead of the inflation rate of 1.7 per cent. In fact, considering inflation, the raises in take-home pay were actually higher than last year, Mr. Toller pointed out.

$23,256 to $120,000

The survey, based on responses from more than 1,600 colleges and universities, found that salaries at four-year colleges had increased by 5.6 per cent, compared to 4.7 per cent at universities and 4 per cent at two-year colleges.

Median administrative salaries ranged from $23,256 for bookstore directors to $120,000 for medical-school deans.

The salaries for nearly all top administrative positions went up this year. The chief executive officer of a higher-education system earned a median salary of $84,959—up 4.7 per cent from last year.

The chief executive of a single campus earned $70,000, while the executive vice-president made $58,916.

Some of the biggest gainers were deans of medicine, whose salaries jumped 14.3 per cent to $120,000, and medical-center administrators, who made $94,700 after a 12.7-per-cent salary increase.

Directors of alumni affairs also did well, climbing 10.3 per cent.

Losers in the survey were deans of mathematics and social sciences, whose salaries declined 2.9 per cent and 1.2 per cent, respectively.

Women and members of minority groups continued to earn less than their white, male counterparts, but that may have been in part because they had spent less time in their current jobs, the survey indicated.

Minority-group members earned 11.3 per cent less than other workers, but they had spent 17.6 per cent less time in their current posts.

Women earned 40.4 per cent less than men, but had spent 36.1 per cent less time in their current positions.

"The fact that the gap exists at all will continue to be the main source of concern for many people," Mr. Toller said.

Data on External-Affairs Posts

The survey showed that salaries for external-affairs positions, such as alumni relations, development, and public relations, went up 6.6 per cent, compared to 3.8 per cent for student-service jobs and 3.7 per cent for academic-administration posts.

Copies of the report, *1986-87 Administrative Compensation Survey*, are available from the order desk, College and University Personnel Association, 11 Dupont Circle, N.W., Suite 120, Washington 20036; (202) 462-1038. The price is $50 per copy for members, $125 for nonmembers who participated in the survey, and $200 for others.

The association's survey of second-level administrators will appear in a future issue of *The Chronicle*.

FACT-FILE

Average Salaries for Full-Time Faculty Members This Year at 1,700 U.S. Colleges and Universities

The following table shows average faculty salaries by rank at 1,700 colleges, universities, and multicampus college systems in 1986-87.

The salaries, which are reported in thousands of dollars and rounded to the nearest hundred, cover all full-time members of the instructional staff except those in medical schools.

The figures are adjusted to a standard, nine-month work year.

The statistics were compiled for the American Association of University Professors by Maryse Eymonerie Associates of McLean, Va.

The designations I, IIA, IIB, III, and IV are defined in the rating table at the right, which gives the percentile distributions of salaries for each academic rank.

To maintain the confidentiality of individual salaries, a dash appears where an institution has five or fewer faculty members at that rank. A blank space indicates that the institution has no faculty members at that rank.

Average faculty salaries for institutions without academic ranks, most of which are two-year colleges, appear in a separate table on Page 22.

The table omits footnotes qualifying the information reported by some institutions.

A table showing faculty pay by rank and one-year increases appeared in the April 8 issue of *The Chronicle*.

The full salary report, which includes data on salaries by sex and fringe-benefit information, may be purchased for $25 prepaid from the American Association of University Professors, Suite 500, 1012 14th Street, N.W., Washington 20005.

AAUP Rating Scale

Category I: Doctoral Institutions

	1+	1	2	3	4
Professor	$62,400	$55,900	$50,300	$46,700	$42,600
Associate professor	42,800	39,400	37,000	35,300	32,500
Assistant professor	35,700	32,900	30,600	29,300	27,800
Instructor	29,300	25,800	23,800	22,400	20,500

Category IIA: Comprehensive Institutions

	1+	1	2	3	4
Professor	$49,100	$44,300	$40,400	$37,800	$34,600
Associate professor	38,200	35,600	33,000	31,300	28,800
Assistant professor	31,300	29,500	27,500	26,100	24,700
Instructor	27,200	24,600	22,500	21,200	19,700

Category IIB: Baccalaureate Institutions

	1+	1	2	3	4
Professor	$46,200	$38,500	$34,200	$30,500	$27,100
Associate professor	35,200	31,500	28,600	26,100	23,300
Assistant professor	28,400	25,900	24,100	22,400	20,300
Instructor	25,500	22,400	20,500	18,900	17,500

Category III: 2-Year Institutions with Academic Ranks

	1+	1	2	3	4
Professor	$41,800	$38,500	$35,300	$32,500	$30,100
Associate professor	36,000	32,800	30,600	28,700	25,800
Assistant professor	30,500	27,900	26,200	24,400	21,500
Instructor	27,400	23,800	22,300	20,800	18,700

Category IV: 2-Year Institutions Without Academic Ranks

	1+	1	2	3	4
All	$40,500	$35,000	$29,500	$26,300	$22,500

Note: Scales are based on actual distributions by average salary in 1986-87, according to data from 1,875 institutions. Percentile rankings are as follows: 1+ = 95th percentile; 1 = 80th percentile; 2 = 60th percentile; 3 = 40th percentile; 4 = 20th percentile. An average salary of $52,000 for the rank of professor in Category 1 institutions would be rated 2 because it falls between the 60th percentile ($50,300) and the 80th percentile ($55,900).

SOURCE: AMERICAN ASSOCIATION OF UNIVERSITY PROFESSORS

ALABAMA

	Prof	Assoc Prof	Asst Prof	Inst
Alabama A&M U, IIA	32.4	29.1	24.7	19.4
Alabama St U, IIA	34.4	31.1	25.5	20.2
Athens St C, IIB	38.4	34.0	27.2	—
Auburn U				
Main campus, I	43.6	34.1	28.7	19.5
Montgomery, IIA	39.2	33.1	26.5	21.7
Birmingham-Southern C, IIB	33.4	26.4	24.3	—
Huntingdon C, IIB	27.9	25.2	21.8	—
Jacksonville St U, IIA	36.0	33.8	28.8	25.7
Judson C, IIB	25.9	—	20.2	—
Livingston U, IIB	30.2	23.9	21.4	18.3
SE Bible C, IIB	—	18.6	—	—
Spring Hill C, IIB	34.2	28.3	24.6	—
Stillman C, IIB	23.9	20.0	19.8	16.0
Troy St U				
Main campus, IIA	36.3	29.7	24.8	21.5
Dothan-Ft Rucker, IIA	35.4	31.5	28.6	—
Montgomery, IIA	—	29.2	26.1	—
Tuskegee U, IIA	30.5	24.9	22.5	18.2
U of Alabama				
Main campus, I	45.2	33.9	28.0	19.7
Birmingham, I	42.1	32.1	26.0	20.2
Huntsville, IIA	44.5	32.8	27.2	21.1
U of Montevallo, IIA	34.2	29.4	25.2	19.4
U of North Alabama, IIA	38.7	31.9	26.8	13.8
U of South Alabama, IIA	37.7	30.7	27.7	22.2

ALASKA

	Prof	Assoc Prof	Asst Prof	Inst
U of Alaska				
Anchorage, IIA	51.8	42.4	34.0	—
Co-op extension, III		49.1	44.7	—
Fairbanks, IIA	57.2	47.2	38.4	31.6
Juneau, IIB	55.7	44.4	36.4	—

ARIZONA

	Prof	Assoc Prof	Asst Prof	Inst
American Grad Sch of Internat'l Mgmt, IIB	39.7	32.0	27.2	—
Arizona St U, I	48.8	37.5	31.1	23.8
Grand Canyon C, IIB	30.6	26.4	21.8	19.0
Northern Arizona U, IIA	44.3	35.1	28.0	22.1
U of Arizona, I	49.6	36.5	30.5	25.6

ARKANSAS

	Prof	Assoc Prof	Asst Prof	Inst
Arkansas C, IIB	33.5	28.1	24.7	—
Arkansas St U				
Main campus, IIA	37.1	31.3	26.1	21.0
Beebe, III		—	26.4	22.6
Arkansas Tech U, IIB	31.9	26.6	26.0	20.4
C of the Ozarks, IIB	23.2	20.9	19.2	17.3
Hendrix C, IIB	34.1	29.1	24.1	
Ouachita Baptist U, IIA	32.4	26.5	22.2	19.4
Southern Ark U, IIB	34.7	30.7	26.8	20.4
U of Arkansas				
Fayetteville, I	42.3	32.9	27.6	20.7
Little Rock, IIA	41.8	33.0	27.6	23.2
Pine Bluff, IIB	32.0	28.2	25.8	21.4
U of Central Ark, IIA	37.7	31.5	25.2	20.1

CALIFORNIA

	Prof	Assoc Prof	Asst Prof	Inst
Azusa Pacific U, IIA	29.2	26.0	23.5	19.9
Biola U, IIA	35.3	27.2	21.9	18.2
California Inst of Tech, I	65.8	47.8	38.9	
Cal Lutheran C, IIA	35.5	28.1	23.5	22.0
California St U				
Bakersfield, IIA	48.8	37.4	29.9	26.2
Chico, IIA	48.9	37.4	30.7	27.3
Dominguez Hills, IIA	49.0	37.4	30.5	—
Fresno, IIA	49.4	37.3	29.9	27.2
Fullerton, IIA	49.2	38.3	30.3	—
Hayward, IIA	49.1	38.0	30.5	27.1
Humboldt St U, IIA	48.5	37.6	30.3	—
Long Beach, IIA	49.4	38.5	30.9	27.0
Los Angeles, IIA	48.9	38.2	31.1	—
Northridge, IIA	49.2	37.6	30.5	26.9
Poly St U-				
Pomona, IIA	49.5	37.6	30.8	—
San Luis Obispo, IIA	48.5	38.0	30.5	—
Sacramento, IIA	48.9	37.5	30.1	—
San Bernardino, IIA	48.2	36.8	30.5	—
San Diego St U, IIA	49.0	38.3	31.3	26.5
San Francisco St U, IIA	48.5	37.3	30.4	26.0
California St U				
San Jose St U, IIA	49.4	37.7	31.0	26.8
Sonoma St U, IIA	49.0	37.4	29.8	—
Stanislaus, IIA	49.0	37.7	30.4	—
Chapman C, IIA	36.9	32.1	26.0	—
Christ C Irvine, IIB	35.8	29.5	23.5	—
Claremont McKenna C, IIB	48.8	35.9	29.0	—
C of Notre Dame, IIA	30.0	23.1	21.0	—
Fremont-Newark CC Dist, III	40.7	36.9	33.0	30.6
Golden Gate U, I	48.4	40.1	33.9	
Harvey Mudd C, IIB	53.5	40.9	31.7	—
Loyola Marymount U, IIA	49.1	39.6	28.3	23.1
Mennonite Bretheren Bible Sem, IIB	—	27.7	—	
Mills C, IIA	44.5	33.6	28.4	—
Mt Saint Mary's C, IIB	32.5	28.6	23.6	20.4
Naval Postgrad Sch, I	48.9	36.2	30.4	
Occidental C, IIB	46.0	35.2	28.5	26.7
Pacific Sch of Religion, IIA	35.5	—	—	
Pacific Union C, IIA	26.6	24.8	23.6	21.7
Palomar C, III		38.0		31.0
Pepperdine U, IIA	46.2	37.8	32.2	—
Pitzer C, IIB	44.6	—	26.6	
Point Loma Nazarene C, IIB	36.4	28.4	22.5	—
Pomona C, IIB	52.4	37.6	29.7	—
Saint Mary's C of Cal, IIA	42.0	32.9	26.6	
Santa Clara U, IIA	58.0	40.5	32.8	
Scripps C, IIB	44.1	31.8	25.1	—
Southern Cal C, IIB	33.7	31.1	25.9	21.6
Southwestern U, IIB	52.3	—	—	
Stanford U, I	67.2	46.8	36.7	
U of California				
Berkeley, I	64.0	42.0	36.2	
Davis, I	56.9	38.3	34.6	
Irvine, I	59.4	41.0	36.3	
Los Angeles, I	62.3	40.4	37.4	
Riverside, I	56.3	39.1	32.9	
San Diego, I	60.4	41.6	34.4	
San Francisco, I	68.9	51.9	42.1	
Santa Barbara, I	58.6	40.5	34.7	
Santa Cruz, I	55.7	38.7	34.2	
U-Wide Services, IIA	57.9	41.6		
U of La Verne, IIA	34.3	24.5	20.8	—
U of the Pacific, IIA	39.8	34.2	29.3	21.4
U of Redlands, IIA	40.5	31.8	28.9	
U of San Diego, IIA	46.9	32.8	27.2	—
U of Southern Cal, I	57.7	41.3	33.3	29.8
Westmont C, IIB	33.7	28.0	24.5	—
Whittier C, IIA	35.1	30.1	25.1	25.5

COLORADO

	Prof	Assoc Prof	Asst Prof	Inst
Adams St C, IIA	33.8	27.6	24.7	22.8
Colorado C, IIB	46.5	34.3	26.9	—
Colorado Mountain C, III	27.5	24.2	—	—
Colorado St U, I	41.4	32.8	26.6	21.2
Fort Lewis C, IIB	34.3	27.7	26.0	—
Iliff Sch of Theol, IIA	41.5	36.9	—	
Mesa C, IIB	33.1	27.9	23.3	20.5
Metropolitan St C, IIB	35.1	29.3	25.5	20.3
Regis C, IIB	32.6	27.6	21.7	
U of Colorado				
Boulder, I	45.3	35.6	31.3	25.4
Colorado Springs, IIA	41.8	33.2	28.3	—
Denver, IIA	42.0	33.3	29.8	20.2
U of Northern Colo, IIA	39.5	29.4	25.0	23.3
U of Southern Colo, IIA	35.9	30.9	26.0	22.5
Western St C of Colo, IIA	33.2	26.0	22.3	—

CONNECTICUT

	Prof	Assoc Prof	Asst Prof	Inst
Albertus Magnus C, IIB	29.7	25.5	22.4	—
Asnuntuck CC, III	—	—	27.1	22.4
Central Conn St U, IIA	45.1	36.9	31.0	25.8
Connecticut C, IIA	42.5	34.0	25.9	—
Eastern Conn St U, IIB	44.2	35.4	27.9	
Fairfield U, IIA	43.6	35.6	30.3	23.2
Greater Hartford CC, III	37.0	32.1	28.3	22.8
Housatonic CC, III	35.5	31.6	29.8	—
Manchester CC, III	37.4	32.3	27.9	22.7
Mattatuck CC, III	36.8	32.1	28.4	23.9
Middlesex CC, III	37.2	33.0	29.6	23.8
Mohegan CC, III	36.9	31.1	27.3	22.5
NW Conn CC, III	36.7	33.0	26.1	—
Norwalk CC, III	37.5	32.2	27.6	23.5
Sacred Heart U, IIB	37.0	29.2	24.3	—
Saint Joseph C, IIA	30.1	26.1	23.1	21.7
South Central CC, III	29.5	31.4	29.1	23.0
Southern Conn St U, IIA	44.3	36.5	31.1	24.9
Trinity C, IIA	49.0	36.5	27.8	—
Tunxis CC, III	34.9	31.9	28.7	22.8
U of Bridgeport, IIA	45.9	36.8	30.3	23.4
U of Connecticut, I	53.8	39.4	33.4	28.8
U of Hartford, IIA	39.8	32.3	26.6	
Wesleyan U, IIA	50.0	35.2	28.0	—
Yale U, I	63.6	38.3	30.2	28.1

DELAWARE

	Prof	Assoc Prof	Asst Prof	Inst
U of Delaware, I	50.3	35.6	28.5	21.5

DISTRICT OF COLUMBIA

	Prof	Assoc Prof	Asst Prof	Inst
American U, I	49.9	36.9	31.0	25.6
Catholic U, I	44.7	32.7	27.3	—
Corcoran Sch of Art, IIB	—	23.7	20.9	
Gallaudet U, IIA	44.2	36.1	28.6	21.5
George Washington U, I	52.6	37.9	29.9	21.6
Georgetown U, I	60.9	41.7	29.6	25.5
Howard U, I	44.2	33.2	27.5	23.4
Mount Vernon C, IIB	—	31.5	24.7	—
Trinity C, IIB	31.9	23.7	20.1	—

FLORIDA

	Prof	Assoc Prof	Asst Prof	Inst
Barry U, IIA	35.3	29.8	[illegible]	20.5
Bethune-Cookman C, IIB	24.1	21.3	19.4	16.6
Eckerd C, IIB	36.4	29.3	24.5	
Embry-Riddle Aeronautical U, IIB	35.4	27.7	22.6	11.5
Florida A&M U, IIA	40.3	32.1	28.6	24.1
Florida Atlantic U, IIA	42.0	32.3	28.7	22.4
Fla International U, IIA	43.2	33.7	29.7	21.2
Florida Southern C, IIB	30.7	25.5	22.5	—
Florida St U, I	44.2	32.0	28.0	21.6
Indian River CC, III	36.5	32.5	27.9	26.3
Jacksonville U, IIB	29.3	22.6	20.7	—
Miami-Dade CC, III	32.4	27.5	23.0	18.8
Rollins C, IIB	41.4	31.8	25.6	—
Stetson U, IIA	42.8	31.8	28.4	18.1
U of Central Florida, IIA	41.6	33.4	28.5	19.9
U of Florida, I	50.8	38.7	32.9	23.0
U of Miami, I	48.8	36.0	29.0	24.3
U of North Florida, IIA	39.8	32.1	27.9	—
U of South Florida, I	44.5	32.7	28.3	23.4
U of West Florida, IIA	40.5	32.4	27.0	21.0

GEORGIA

	Prof	Assoc Prof	Asst Prof	Inst
Agnes Scott C, IIB	38.5	31.1	25.2	—
Albany JC, III	31.8	28.4	26.3	—
Armstrong St C, IIA	40.0	31.9	26.6	20.1
Atlanta Christian C, IIB	24.5	—		
Atlanta JC, III	—	29.2	26.0	—
Augusta C, IIA	40.3	31.3	26.4	21.2
Berry C, IIB	38.1	29.9	24.5	—
Brunswick JC, III	—	32.6	25.6	22.5
Columbus C, IIA	36.9	31.6	26.3	21.7
Covenant C, IIB	31.1	26.6	21.4	
Emanuel County JC, III		29.4	26.6	—
Floyd JC, III	36.6	27.4	24.7	20.1
Georgia Inst of Tech, I	51.5	39.0	35.5	24.1
Georgia Southern C, IIA	39.5	32.9	25.5	20.7
Ga Southwestern C, IIA	38.4	32.6	27.5	22.7
Georgia St U, I	49.7	36.8	30.0	22.4
Kennesaw C, IIB	41.9	34.8	28.7	22.4
Macon JC, III	35.1	30.0	25.3	20.9
Mercer U, IIA	38.7	29.6	25.2	21.7
North Georgia C, IIA	37.5	30.0	28.4	21.7
Oglethorpe U, IIB	35.2	26.7	23.7	
Paine C, IIB	25.5	20.6	18.9	16.5
Southern Tech Inst, IIA	35.9	32.3	28.3	—
U of Georgia, I	50.7	35.3	28.8	20.8
Valdosta St C, IIA	38.9	32.2	27.7	21.1
Waycross JC, III	—	—	27.4	
Wesleyan C, IIB	29.3	25.0	22.2	—
West Georgia C, IIA	39.2	31.4	27.2	20.2

HAWAII

	Prof	Assoc Prof	Asst Prof	Inst
Hawaii Loa C, IIB	—	22.4	20.3	—
U of Hawaii				
Hilo, IIB	38.9	31.8	25.6	—
Manoa, I	46.8	35.8	29.2	22.4
West Oahu, IIB	—	29.2		

IDAHO

	Prof	Assoc Prof	Asst Prof	Inst
Boise St U, IIA	33.0	28.8	24.9	21.0
C of Idaho, IIB	29.0	27.3	18.4	—
C of Southern Idaho, III	26.4	23.0	21.4	18.9
Idaho St U, IIA	33.6	28.0	24.2	22.9
Lewis-Clark St C, IIB	29.3	25.1	23.0	
NW Nazarene C, IIB	27.5	22.4	20.5	17.9
U of Idaho, I	37.8	29.7	27.0	—

ILLINOIS

	Prof	Assoc Prof	Asst Prof	Inst
Augustana C, IIB	40.4	32.6	26.0	22.7
Aurora U, IIB	29.4	27.3	24.5	—
Barat C, IIB	25.9	—	19.6	13.6
Blackburn U, IIB	25.6			
Bradley U, IIA	39.2	31.1	27.4	20.2
Chicago St U, IIA	33.9	28.3	24.5	21.5
Christ Seminary-Seminex, IIB	33.1	—		
City C's of Chicago, III	41.7	38.6	34.4	28.7
C of DuPage, III	41.3	35.9	29.6	23.6
Concordia C, IIA	29.8	26.0	21.3	—
DePaul U, IIA	45.2	35.8	29.7	22.7
Eastern Illinois U, IIA	35.5	29.8	24.9	20.2
Elmhurst C, IIB	37.4	30.8	25.1	21.5
Eureka C, IIB	—	24.8	21.7	—
Garrett-Evangelical Theol Sem, IIA	35.8	32.5	—	—
Greenville C, IIB	23.6	20.5	17.6	
Ill Benedictine C, IIA	34.8	28.5	25.7	
Illinois Central C, III	35.6	30.2	26.8	23.6
Illinois C, IIB	34.3	29.4	21.4	—
Illinois Inst of Tech, I	48.4	36.6	30.7	18.3
Illinois St U, IIA	40.2	32.4	27.0	—
Illinois Wesleyan U, IIB	38.0	29.5	24.8	24.1
Judson C, IIB	28.4	26.5	20.9	—
Knox C, IIB	36.4	28.8	22.4	
Lake Forest C, IIB	42.1	34.5	26.1	24.3
Lewis and Clark CC, III	33.9	29.4	26.3	23.4
Lewis U, IIA	30.5	26.3	22.4	21.7
Loyola U of Chicago, I	47.7	37.0	29.6	29.3
Lutheran Sch of Theol Chicago, IIA	35.6	—	—	
MacCormac C, IIB	—	20.9	19.0	—
MacMurray C, IIB	27.3	22.8	20.2	—
McKendree C, IIB	31.8	27.2	24.9	23.4
Mennonite C of Nursing, IIB		—	—	21.7
Millikin U, IIB	38.1	29.0	24.7	19.5
Monmouth C, IIB	35.1	28.7	23.4	—
National C of Chiropractic, IIB	31.4	27.3	21.9	21.0
North Central C, IIB	37.1	30.4	25.6	—
North Park C, IIB	30.3	26.1	21.4	19.0
Northeastern Ill U, IIA	35.1	29.6	25.5	—
Northern Illinois U, I	43.3	33.9	27.5	17.5
Northwestern U, I	56.7	38.4	34.4	
Olivet Nazarene C, IIB	27.3	23.7	20.7	18.7
Parks C of Saint Louis U, IIB	39.7	30.4	23.3	25.1
Principia C, IIB	35.3	29.5	24.3	18.5
Quincy C, IIB	27.2	24.9	20.2	—
Richland CC, III	29.6	28.2	24.6	—
Rockford C, IIB	32.0	25.7	22.5	—
Roosevelt U, IIA	31.6	26.9	25.0	—
Rosary C, IIA	—	27.7	24.2	—
Saint Xavier C, IIB	33.8	28.6	23.2	21.6
Sangamon St U, IIA	38.6	33.3	28.2	—
Sauk Valley CC, III	31.5	28.3	23.7	21.3
Sch of Art Inst of Chicago, IIB	34.4	28.8	24.1	
Seabury-Western Theol Sem, IIA	22.7	—		—
Southern Illinois U				
Carbondale, I	43.3	33.3	28.2	23.4
Edwardsville, IIA	39.3	33.2	28.9	22.8
Trinity Christian C, IIB	31.3	—	25.7	—
Trinity C, IIB	—	23.4	21.0	—
Trinity Evangelical Divinity Sch, IIA	36.8	30.6	28.4	—
U of Chicago, I	59.4	39.0	34.0	24.5
U of Illinois				
Chicago, I	50.8	36.2	31.4	23.5
Urbana-Champaign, I	54.0	38.0	33.1	—
U of Saint Mary of the Lake, IIB	10.4		—	8.7
Western Illinois U, IIA	36.4	31.8	27.8	17.7
Wheaton C, IIA	37.4	31.5	27.0	

INDIANA

	Prof	Assoc Prof	Asst Prof	Inst
Ball St U, I	39.4	32.0	25.6	17.5
Butler U, IIA	36.5	30.7	24.5	23.5
Calumet C, IIB	22.3	—	16.1	—
DePauw U, IIB	41.0	32.5	25.3	
Earlham C, IIB	38.7	31.1	24.7	
Fort Wayne Bible C, IIB	—	20.8	18.3	
Franklin C of Indiana, IIB	26.5	24.2	21.5	—
Hanover C, IIB	39.7	29.0	24.0	21.8
Huntington C, IIB	29.3	24.5	20.0	17.2
Indiana St U, I	38.7	30.4	25.1	19.2
Indiana U				
Bloomington, I	48.7	34.5	29.2	—
East, III	—	28.4	22.8	
Indianapolis, IIA	44.6	33.1	28.0	—
Kokomo, IIB	34.5	30.3	25.4	
Northwest, IIA	42.1	32.2	26.0	—
Purdue U Ft Wayne, IIA	38.9	31.2	24.8	16.6
South Bend, IIA	37.7	32.0	24.2	—
Southeast, IIB	38.0	29.1	25.0	
Manchester C, IIB	30.8	26.3	22.3	—
Marion C, IIB	26.5	21.9	18.7	—
Oakland City C, IIB	20.2	18.8	18.0	16.3
Purdue U				
Main campus, I	52.0	36.4	30.6	20.7
Calumet, IIA	41.1	32.6	27.0	20.4
North Central, III	36.6	31.0	24.5	—
Rose-Hulman Inst of Tech, IIA	42.8	36.9	30.4	
Saint Joseph's C, IIB	27.6	24.4	22.5	—
Saint Mary's C, IIB	41.5	33.0	25.4	—
Saint Meinrad C, IIB	—	—	25.9	
Taylor U, IIB	28.6	24.8	21.6	—
Tri-State U, IIB	32.3	26.4	23.2	
U of Evansville, IIA	34.1	29.0	24.9	—
U of Indianapolis, IIA	34.8	28.3	23.9	—
U of Notre Dame, I	56.0	40.6	33.7	32.2
U of Southern Ind, IIA	36.9	31.1	26.2	21.0
Valparaiso U, IIA	38.4	30.5	25.9	19.7
Vincennes U, III	32.0	26.1	21.9	19.1
Wabash C, IIB	44.5	32.9	26.0	—

IOWA

	Prof	Assoc Prof	Asst Prof	Inst
Briar Cliff C, IIB	29.2	25.9	22.3	19.5
Buena Vista C, IIB	37.2	29.7	25.0	—
Central U of Iowa, IIB	36.1	30.3	25.6	22.5
Clarke C, IIB	27.3	26.3	20.0	19.2
Coe C, IIB	35.0	26.9	21.5	—

Continued on Following Page

FACT-FILE—Continued

IOWA—Continued

	Prof	Assoc Prof	Asst Prof	Inst
Cornell C, IIB	35.7	28.4	24.0	—
Dordt C, IIB	29.5	26.3	23.0	22.0
Graceland C, IIB	24.7	21.4	19.5	—
Grinnell C, IIB	45.8	33.1	25.6	24.7
Iowa St U, I	43.9	33.3	27.9	19.6
Iowa Wesleyan C, IIB	20.3	17.3	15.3	14.9
Loras C, IIA	31.4	25.9	22.5	18.5
Luther C, IIB	34.4	28.8	23.2	20.5
Morningside C, IIB	27.8	23.4	20.7	18.9
Mount Mercy C, IIB	26.4	23.2	22.7	17.9
Northwestern C, IIB	29.2	25.0	22.4	—
Palmer C of Chiropractic, IIB	35.7	29.1	23.4	19.4
Saint Ambrose C, IIB	31.6	29.2	25.6	21.6
Simpson C, IIB	34.8	28.0	25.4	22.6
U of Iowa, I	46.3	35.3	29.4	29.0
U of Northern Iowa, IIA	37.4	30.7	26.2	21.5
Upper Iowa U, IIB	—	22.8	18.7	17.0
Waldorf C, III	26.4	23.4	20.4	—
Wartburg C, IIB	32.5	27.3	22.6	17.1
Westmar C, IIB	—	—	18.8	18.9

KANSAS

	Prof	Assoc Prof	Asst Prof	Inst
Baker U, IIB	26.5	22.2	19.6	
Benedictine C, IIB	27.1	23.6	20.0	17.1
Bethany C, IIB	29.2	25.1	21.3	—
Bethel C, IIB	25.2	23.4	20.4	—
Emporia St U, IIA	34.2	29.2	25.9	—
Fort Hays St U, IIA	33.5	27.8	24.3	20.4
Friends U, IIB	24.6	21.3	20.0	—
Kansas St U, I	40.3	30.6	27.1	21.2
Kansas Tech Inst, III	30.4	28.9	25.8	—
Kansas Wesleyan U, IIB	22.0	18.1	16.6	—
Marymount C of Kan, IIB	—	20.2	18.5	—
Ottawa U, IIB	25.1	22.8	19.5	—
Pittsburg St U, IIA	33.7	30.2	25.0	20.2
Saint Mary C, IIB	25.9	23.3	18.6	16.2
Tabor C, IIB	26.0	21.9	19.3	—
U of Kansas, I	42.8	31.5	28.6	19.1
Wichita St U, IIA	41.3	31.5	26.1	19.9

KENTUCKY

	Prof	Assoc Prof	Asst Prof	Inst
Asbury C, IIB	26.8	22.5	19.0	16.5
Asbury Theol Sem, IIA	31.0	27.8	—	—
Bellarmine C, IIB	36.1	28.9	23.9	—
Berea C, IIB	35.0	28.4	23.6	19.0
Centre C of Ky, IIB	36.4	28.9	24.3	—
Eastern Kentucky U, IIA	34.1	29.3	25.3	20.0
Georgetown C, IIB	29.5	25.5	21.5	17.6
Ky Christian C, IIB	23.6	—	—	
Kentucky St U, IIA	32.2	27.8	24.4	21.3
Lees C, III	20.6	—	18.0	
Morehead St U, IIA	34.8	28.5	25.1	20.0
Murray St U, IIA	35.0	30.1	25.7	21.3
Northern Kentucky U, IIA	37.0	30.8	23.9	22.4
Pikeville C, IIB	—	22.5	20.4	17.0
Spalding U, IIB	27.8	22.5	22.3	18.4
Thomas More C, IIB	28.6	23.1	19.9	—
Transylvania U, IIB	32.7	27.8	25.9	—
U of Kentucky, I	45.4	33.7	28.7	28.9
U of Kentucky CC, III	30.5	25.1	20.9	19.8
U of Louisville, IIA	43.3	32.5	26.9	21.3
Western Kentucky U, IIA	35.3	29.3	25.6	20.1

LOUISIANA

	Prof	Assoc Prof	Asst Prof	Inst
Centenary C of La, IIB	33.5	29.0	23.8	19.0
Grambling St U, IIA	30.7	29.3	25.2	20.0
Louisiana C, IIB	28.5	24.7	23.2	—
Louisiana St U				
A&M C, I	44.9	34.0	29.0	20.3
Alexandria, III	30.8	26.1	22.0	18.9
Eunice, III	—	27.1	24.2	20.9
Shreveport, IIA	34.5	30.9	26.0	22.5
Louisiana Tech U, IIA	35.1	29.1	25.7	21.7
Loyola U, IIA	43.4	35.5	29.1	22.6
McNeese St U, IIA	33.2	30.1	25.7	22.0
Nicholls St U, IIA	33.1	28.8	24.9	21.0
Northeast La U, IIA	36.7	30.8	26.0	19.6
Our Lady of Holy Cross C, IIB	—	21.9	19.9	23.5
Southeastern La U, IIA	33.2	30.0	25.4	20.1
Southern U A&M C, IIA	33.1	28.2	23.9	19.4
Tulane U, I	46.3	36.2	29.7	20.4
U of New Orleans, IIA	38.9	30.8	25.2	19.2
U of SW Louisiana, IIA	38.2	31.3	27.0	21.7
Xavier U of La, IIB	26.0	23.1	20.3	18.2

MAINE

	Prof	Assoc Prof	Asst Prof	Inst
Bates C, IIB	46.5	35.4	25.4	25.5
Bowdoin C, IIB	50.0	35.9	27.8	—
Colby C, IIB	49.7	35.6	26.8	25.6
Husson C, IIB	30.8	27.7	25.4	—
Saint Joseph's C, IIB	—	—	19.0	—
U of Maine				
Augusta, III	31.6	24.3	20.0	—
Farmington, IIB	34.6	27.4	22.7	20.0
Fort Kent, IIB	—	27.1	23.0	—
Machias, IIB	31.4	28.9	20.8	
Orono, IIA	40.0	30.6	25.2	13.6
Presque Isle, IIB	34.3	28.0	21.8	
U of Southern Maine, IIA	39.2	31.4	25.0	18.5

MARYLAND

	Prof	Assoc Prof	Asst Prof	Inst
Allegany CC, III	31.8	25.9	22.0	20.4
Anne Arundel CC, III	41.1	35.0	28.2	24.6
Bowie St C, IIB	41.6	35.3	28.3	20.6
Capitol Inst of Tech, IIB	—	26.4	21.6	
Catonsville CC, III	42.5	35.4	29.7	23.4
Cecil CC, III	33.4	—	25.5	19.1
Charles County CC, III	35.9	32.7	24.7	—
Chesapeake C, III	—	28.2	23.0	—
C of Notre Dame of Maryland, IIB	31.1	26.0	24.2	—
Columbia Union C, IIB	23.7	22.8	21.1	18.3
CC of Baltimore, III	35.2	29.2	25.6	21.4
Coppin St C, IIB	40.9	32.4	27.2	23.0
Dundalk CC, III	36.5	29.4	30.3	—
Essex CC, III	43.4	33.9	28.9	22.2
Frederick CC, III	39.4	29.5	23.7	—
Frostburg St C, IIA	39.1	31.5	27.5	23.7
Garrett CC, III	—	—	20.9	—
Goucher C, IIB	37.0	28.0	23.6	19.8
Hagerstown JC, III	32.5	28.9	22.5	—
Harford CC, III	39.0	34.9	31.1	22.1
Hood C, IIA	38.2	30.4	25.1	20.6
Howard CC, III	39.2	33.6	26.5	20.6
Johns Hopkins U, I	59.8	40.5	33.5	26.8
Peabody Inst, IIB	30.2			
Loyola C, IIA	42.5	36.1	28.9	—
Montgomery C, III	39.7	31.2	26.9	23.3
Morgan St U, IIA	45.6	35.9	30.7	24.6
Mount Saint Mary's C, IIB	37.2	29.5	23.1	—
Prince George's CC, III	38.9	33.6	26.5	—

MARYLAND—Continued

	Prof	Assoc Prof	Asst Prof	Inst
Saint Mary's C of Md, IIB	41.4	32.6	25.0	22.1
Salisbury St C, IIA	39.8	31.5	25.8	21.5
Towson St U, IIA	41.9	35.4	28.3	22.2
U of Baltimore, IIA	47.4	39.4	31.4	—
U of Maryland				
Baltimore City, I	55.3	43.9	32.6	24.2
Baltimore County, IIA	51.5	36.6	30.6	22.2
College Park, I	52.8	38.0	31.2	23.2
Eastern Shore, IIA	—	35.4	33.2	27.7
Washington Bible C, IIB	—	20.9	—	
Washington C, IIB	36.0	30.3	23.2	
Western Maryland C, IIA	36.9	30.6	26.6	—
Wor-Wic Tech CC, III	—	30.0	26.2	22.6

MASSACHUSETTS

	Prof	Assoc Prof	Asst Prof	Inst
Amherst C, IIB	52.2	37.3	29.8	
Andover Newton Theol Sch, IIA	32.5	—	—	
Anna Maria C, IIB	—	27.9	23.9	—
Assumption C, IIB	38.0	31.2	26.6	—
Babson C, IIB	57.1	44.5	36.6	—
Berklee C of Music, IIB	33.6	27.8	22.9	18.7
Boston C, I	51.9	38.6	31.5	27.6
Brandeis U, I	52.4	37.8	29.5	—
Bridgewater St C, IIA	39.0	34.6	30.2	23.7
Bristol CC, III	35.0	29.6	26.3	22.3
Bunker Hill CC, III	34.1	29.6	25.8	21.9
Cape Cod CC, III	35.9	30.2	27.5	24.7
Chamberlayne JC, III	—	—	21.5	—
Clark U, IIA	48.5	36.2	29.3	—
C of Our Lady of the Elms, IIB	—	25.7	23.4	—
C of the Holy Cross, IIB	46.2	34.8	27.1	22.8
Dean JC, III	30.9	30.1	21.5	18.2
Emerson C, IIA	48.6	38.0	30.0	—
Emmanuel C, IIB	34.5	28.2	24.2	20.3
Episcopal Divinity Sch, IIB	22.5		—	
Fitchburg St C, IIB	38.5	33.7	29.1	24.2
Gordon C, IIB	32.4	27.7	23.1	—
Gordon-Conwell Theol Sem, IIA	35.9	31.3	24.0	
Hampshire C, IIB	40.5	32.2	26.5	
Harvard U, I	69.7	36.9	34.0	19.8
Mass Inst of Tech, I	62.4	43.9	35.7	25.9
Merrimack C, IIB	39.0	32.6	26.1	
Mount Holyoke C, IIB	45.9	34.0	26.7	21.6
North Shore CC, III	36.6	29.5	25.2	21.7
Northeastern U, I	49.5	37.9	31.8	22.2
Regis C, IIB	35.3	29.4	25.2	—
Roxbury CC, III	34.8	30.6	24.8	20.4
Simmons C, IIA	46.7	36.0	29.8	26.4
Smith C, IIA	50.6	36.6	28.6	21.3
Southeastern Mass U, IIA	42.0	34.6	30.4	—
Springfield C, IIA	36.8	29.2	23.3	17.3
Springfield Tech CC, III	35.6	30.5	27.0	23.5
Stonehill C, IIB	35.8	29.4	25.2	
Suffolk U, IIA	48.4	38.5	29.7	25.8
Tufts U, I	51.2	38.1	32.1	
U of Massachusetts				
Amherst, I	52.6	41.3	32.4	29.3
Boston, IIA	51.0	42.0	34.5	—
Wellesley C, IIB	54.9	37.8	31.7	25.9
W New England C, IIA	45.9	35.1	30.0	23.7
Wheaton C, IIB	44.4	33.6	26.4	—
Wheelock C, IIB	37.2	28.8	22.8	22.0
Williams C, IIB	52.2	36.3	29.3	
Worcester Poly Inst, IIA	48.7	38.6	34.3	

MICHIGAN

	Prof	Assoc Prof	Asst Prof	Inst
Adrian C, IIB	31.4	24.8	20.8	—
Albion C, IIB	39.8	31.8	25.5	20.2
Alma C, IIB	36.5	29.9	24.0	—
Aquinas C, IIB	32.4	29.6	22.8	—
Calvin C, IIB	34.8	30.2	25.8	21.8
Central Michigan U, IIA	41.4	34.8	28.9	22.8
Concordia C, IIB	28.4	24.7	21.7	—
Eastern Michigan U, IIA	39.1	33.9	28.5	25.1
Ferris St C, IIB	37.1	31.8	28.2	25.0
Grand Rapids Baptist C, IIB	25.8	22.8	19.1	
Grand Valley St C, IIA	39.4	33.2	25.9	—
Hope C, IIB	35.2	30.9	24.1	20.9
Jordan C, IIB	—		18.8	15.1
Kalamazoo C, IIB	38.1	28.9	25.7	—
Lake Superior St C, IIB	35.3	31.2	26.7	22.5
Madonna C, IIB	34.3	27.1	23.1	21.4
Marygrove C, IIA	28.0	23.4	18.9	16.5
Mercy C of Detroit, IIB	31.5	25.4	21.0	18.6
Michigan St U, I	46.1	34.8	29.7	22.8
Michigan Tech U, IIA	49.2	36.4	30.5	22.8
Nazareth C, IIB	—	26.3	21.6	19.7
Northern Michigan U, IIA	39.5	33.0	25.2	21.4
Northwestern Mich C, III	36.8	30.3	26.1	21.9
Oakland U, IIA	43.9	34.4	29.7	27.2
Olivet C, IIB	27.6	23.6	18.4	—
Siena Heights C, IIB		24.7	23.4	—
Spring Arbor C, IIB	25.8	23.2	20.4	—
U of Detroit, I	37.4	33.2	27.2	19.6
U of Michigan				
Ann Arbor, I	55.9	41.8	34.7	23.6
Dearborn, IIA	40.7	30.9	27.9	
Flint, IIA	41.5	34.1	27.2	—
Wayne St U, I	42.2	36.7	31.3	25.1
Western Michigan U, I	41.1	33.4	28.0	20.7

MINNESOTA

	Prof	Assoc Prof	Asst Prof	Inst
Augsburg C, IIB	29.1	24.4	21.5	17.7
Bemidji St U, IIA	39.7	31.5	24.6	18.9
Bethel C, IIB	32.2	26.8	22.9	20.6
Carleton C, IIB	45.7	36.6	27.7	23.6
C of Saint Benedict, IIB	36.1	28.7	24.4	20.9
C of Saint Catherine, IIB	35.1	29.3	24.5	21.1
C of Saint Scholastica, IIB	—	27.1	24.1	22.5
C of Saint Thomas, IIA	42.9	34.2	28.3	22.5
Concordia C Moorhead, IIB	36.6	30.3	24.3	18.9
Gustavus Adolphus C, IIB	37.7	31.0	25.2	21.4
Hamline U, IIB	32.3	25.6	22.6	
Macalester C, IIB	44.6	32.6	25.9	22.7
Metropolitan St U, IIB	40.5	34.7	28.1	
Minneapolis C of Art & Design, IIB	32.2	26.8	21.9	17.2
Minnesota Bible C, IIB	29.8			
Moorhead St U, IIA	42.1	33.8	27.3	20.7
Northwestern C, IIB	30.7	25.4	22.7	—
Saint Cloud St U, IIA	42.2	32.5	27.6	19.7
Saint John's U, IIB	40.1	33.4	26.7	21.8
Saint Mary's C, IIA	34.8	27.5	23.2	—
Saint Olaf C, IIB	40.7	32.2	25.3	22.2
Saint Paul Bible C, IIB	—	25.0	21.9	18.7
Southwest St U, IIB	42.6	33.9	27.7	—

MINNESOTA—Continued

	Prof	Assoc Prof	Asst Prof	Inst
U of Minnesota				
Duluth, IIA	44.4	34.9	28.3	23.5
Morris, IIB	42.3	32.1	26.6	22.8
Twin Cities, I	50.2	36.4	31.3	24.8
Tech C Crookston, III	—	32.6	28.4	23.3
Tech C Waseca, III	—	30.9	27.9	—

MISSISSIPPI

	Prof	Assoc Prof	Asst Prof	Inst
Alcorn St U, IIB	29.6	25.2	20.5	16.2
Delta St U, IIA	32.5	27.5	23.1	19.2
Millsaps C, IIB	35.2	28.5	24.2	—
Mississippi St U, I	39.5	31.2	26.3	19.8
Miss U for Women, IIA	30.5	24.3	23.0	19.8
Miss Valley St U, IIB	28.4	24.9	21.2	17.3
Reformed Theol Sem, IIB	34.1	—	—	
U of Mississippi, I	38.6	30.6	25.0	18.7
U of Southern Miss, I	40.4	31.6	26.7	19.9

MISSOURI

	Prof	Assoc Prof	Asst Prof	Inst
Avila C, IIB	29.1	26.7	21.0	21.2
Central Bible C, IIB	—	23.6	19.6	16.0
Central Methodist C, IIB	27.2	25.1	22.4	18.5
Central Missouri State U, IIA	36.4	31.5	26.4	20.4
Columbia C, IIB	23.5	22.9	19.6	17.6
Concordia Sem, IIA	29.2	26.1	21.5	
Culver-Stockton C, IIB	32.0	23.8	20.1	—
Drury C, IIB	33.3	30.9	22.9	19.8
Evangel C, IIB	27.7	25.5	20.8	16.0
Fontbonne C, IIB	19.0	18.3	14.8	—
Hannibal-LaGrange C, III	—	—	20.0	17.6
Harris-Stowe St C, IIB	31.3	25.3	26.0	—
Kansas City Art Inst, IIB	31.7	25.6	—	
Lincoln U, IIA	30.9	26.9	22.8	19.5
Lindenwood C, IIA	28.7	23.7	21.1	—
Maryville C, IIB	30.2	24.1	19.0	—
Missouri Baptist C, IIB	—	—	16.2	—
Mo Southern St C, IIB	37.8	32.0	27.1	22.9
Mo Western St C, IIB	35.6	31.3	26.1	21.0
Northeast Mo St U, IIA	39.1	32.8	27.3	22.9
Northwest Mo St U, IIA	38.3	32.4	25.8	22.0
Park C, IIB	25.7	20.2	16.5	
Rockhurst C, IIB	36.4	28.8	25.3	21.8
St Louis CC				
Florissant Valley, III	39.5	32.7	26.4	—
Forest Park, III	38.7	33.1	26.0	22.4
Meramec, III	37.9	32.4	25.8	22.2
Saint Louis U, I	45.1	32.7	27.4	23.3
Sch of the Ozarks, IIB	28.7	24.0	21.3	
Southeast Mo St U, IIA	37.8	32.1	27.3	23.0
Southwest Baptist U, IIB	28.2	21.2	20.3	20.1
Southwest Mo St U, IIA	39.7	33.5	28.0	21.4
Tarkio C, IIB	—	22.1	21.0	17.5
U of Missouri				
Columbia, I	41.6	32.0	28.6	20.9
Kansas City, I	40.9	32.2	27.6	18.8
Rolla, IIA	44.3	35.2	31.3	—
St Louis, IIA	42.1	32.6	27.5	29.6
Washington U, I	51.2	37.1	29.7	21.2
Westminster C, IIB	32.9	27.0	23.1	—
William Jewell C, IIB	31.3	26.5	22.5	19.8

MONTANA

	Prof	Assoc Prof	Asst Prof	Inst
Carroll C, IIB	30.9	25.9	21.6	
C of Great Falls, IIB	24.8	20.9	19.4	—
Eastern Montana C, IIA	31.3	27.4	23.3	20.0
Montana C of Mineral Science & Tech, IIB	39.3	31.3	25.8	21.4
Montana St U, IIA	38.5	30.9	26.1	20.4
Northern Montana C, IIA	31.5	27.7	24.9	20.3
Rocky Mountain C, IIB	28.8	23.9	20.0	—
U of Montana, I	33.7	27.5	24.3	20.2
Western Montana C, IIA	32.6	26.1	21.8	

NEBRASKA

	Prof	Assoc Prof	Asst Prof	Inst
Bellevue C, IIB	—	23.1	20.4	
Chadron St C, IIA	34.6	27.1	22.8	18.9
C of Saint Mary, IIB	—	24.2	22.5	20.2
Concordia Teachers C, IIA	24.5	22.3	17.6	—
Creighton U, IIA	44.3	33.1	26.2	20.8
Dana C, IIB	23.9	21.2	19.6	—
Doane C, IIB	29.9	25.5	21.5	—
Hastings C, IIB	29.7	25.7	22.2	17.9
Kearney St C, IIA	34.6	28.5	23.6	19.0
Midland Lutheran C, IIB	27.5	24.1	22.5	20.1
Neb Wesleyan U, IIB	33.0	27.3	24.1	—
Peru St C, IIB	32.3	25.7	23.2	19.7
Union C, IIB	22.2	22.9	21.7	22.0
U of Nebraska				
Lincoln, I	40.1	30.3	26.6	17.9
Omaha, IIA	34.4	27.6	24.1	22.6
Wayne St C, IIA	34.9	28.0	23.4	19.6
York C, III	—	23.5	—	—

NEVADA

	Prof	Assoc Prof	Asst Prof	Inst
U of Nevada				
Reno, I	44.6	35.7	29.5	—
Las Vegas, IIA	45.0	36.7	30.9	27.3

NEW HAMPSHIRE

	Prof	Assoc Prof	Asst Prof	Inst
Colby-Sawyer C, IIB	27.7	22.0	20.3	—
Dartmouth C, IIA	52.7	37.5	30.5	22.5
Franklin Pierce C, IIB	30.8	27.7	22.1	—
Franklin Pierce Law Center, IIB	51.3		—	
NH Voc Tech C				
Claremont, III	25.6	20.9	19.0	—
Laconia, III	26.5	22.0	—	
Manchester, III	25.4	21.6	—	
Stratham, III	24.7	21.0	—	
Plymouth St C, IIA	36.7	29.6	25.4	—
U of New Hampshire, I	43.4	33.3	27.8	—

NEW JERSEY

	Prof	Assoc Prof	Asst Prof	Inst
Atlantic CC, III	38.8	34.0	28.3	—
Caldwell C, III	28.5	23.9	16.8	—
Centenary C, IIB	—	22.8	19.7	—
C of Saint Elizabeth, IIB	30.4	26.5	21.5	18.5
County C of Morris, III	42.0	35.1	28.4	24.6
Cumberland County C, III	—	34.4	32.5	27.4
Drew U, I	43.7	32.9	26.2	22.8
Fairleigh Dickinson U, IIA	42.2	34.4	28.9	22.9
Felician C, IIB	23.9	20.8	19.7	17.7
Georgian Court C, IIB	30.7	31.2	25.9	20.7
Hudson County CC, III	—	26.2	22.3	18.0
Kean C of NJ, IIA	47.5	35.4	29.6	22.2
Monmouth C, IIA	41.9	34.8	28.3	—

NEW JERSEY—Continued

	Prof	Assoc Prof	Asst Prof	Inst
Montclair St C, IIA	47.8	38.7	31.3	24.5
Princeton Theol Sem, I	52.5	45.7	33.1	—
Princeton U, I	63.4	40.1	31.0	26.2
Rider C, IIA	45.8	37.9	31.7	—
Rutgers U				
Camden, IIB	63.5	42.9	32.6	26.7
New Brunswick, I	59.4	42.2	32.6	24.0
Newark, IIA	62.3	44.6	35.8	26.1
Saint Peter's C, IIB	34.2	28.1	23.3	21.6
Union County C, III	43.7	32.6	27.0	22.0
Upsala C, IIB	33.2	27.5	21.9	18.8
Westminster Choir C, IIA	36.5	27.8	19.9	16.4
William Paterson C, IIA	48.1	38.5	30.8	23.5

NEW MEXICO

	Prof	Assoc Prof	Asst Prof	Inst
C of Santa Fe, IIB	23.0	22.5	19.1	
Eastern NM U, IIA	36.4	30.7	25.7	21.8
Roswell, III			—	24.4
NM Highlands U, IIA	32.9	26.9	23.4	—
New Mexico Inst of Mining & Tech, I	38.6	28.6	28.2	—
NM Military Inst, III	—	29.0	24.6	23.7
New Mexico St U				
Main campus, I	40.1	31.6	26.3	19.7
Alamogordo, III	—	29.7	23.1	22.6
Carlsbad, III	—	—	25.7	—
Dona Ana, III			20.4	19.8
Grants, III		—	—	19.2
San Juan C, III	—	—	27.7	25.7
U of New Mexico, I	41.7	30.7	26.3	20.3
Western NM U, IIA	34.2	29.3	23.4	—

NEW YORK

	Prof	Assoc Prof	Asst Prof	Inst
Albany C of Pharmacy, IIB	40.5	32.2	—	—
Alfred U, IIA	39.7	32.7	27.9	—
Bard C, IIB	39.3	32.1	24.7	
Barnard C, IIB	51.9	35.0	28.9	21.6
Canisius C, IIB	37.9	32.0	26.8	—
Cazenovia C, III	28.1	—	20.4	16.3
Clarkson U, IIA	54.9	40.9	34.8	32.8
Colgate U, IIB	50.9	38.6	29.5	24.5
C of Aeronautics, III	27.1	27.3	24.4	19.9
C of Mt St Vincent, IIB	34.1	26.9	23.7	—
C of New Rochelle, IIA	39.8	32.7	26.5	22.3
Columbia U, I	61.5	43.7	33.3	—
Teachers C, I	50.5	38.0	28.7	28.5
Concordia C, IIB	27.9	23.3	19.2	—
Cornell U				
Endowed C's, I	56.6	40.7	32.4	—
D'Youville C, IIB	31.0	23.5	19.8	18.0
Dominican C of Blauvelt, IIB	—	29.2	25.1	21.3
Elmira C, IIA	34.1	24.9	22.6	19.3
Fordham U, I	52.6	39.4	29.9	26.8
Hamilton C, IIB	46.8	35.1	27.2	—
Hartwick C, IIB	37.4	32.1	24.3	—
Hilbert C, III	—	—	19.2	16.5
Hobart-William Smith C's, IIB	43.3	33.5	26.3	22.0
Hofstra U, I	49.1	38.2	31.6	28.8
Houghton C, IIB	28.3	24.4	21.3	—
Iona C, IIA	45.0	37.0	29.8	26.0
Ithaca C, IIB	41.4	33.1	25.9	19.1
JC of Albany, III	28.0	24.1	18.8	17.9
Le Moyne C, IIB	39.7	32.4	25.8	24.1
Long Island U, IIA	42.5	33.9	27.6	22.6
Manhattan C, IIA	44.7	37.6	29.8	22.0
Manhattanville C, IIA	39.2	35.1	25.7	—
Marist C, IIB	42.2	33.5	26.3	20.0
Marymount C, IIB	36.0	29.7	23.8	—
Marymount Manhattan C, IIB	—	29.1	24.9	—
Molloy C, IIB	32.9	25.1	21.8	16.5
Mount Saint Mary C, IIB	34.8	28.9	23.6	19.5
Nazareth C of Rochester, IIB	37.4	31.0	24.9	—
NY Inst of Tech, IIA	43.3	36.1	28.2	24.8
New York U, I	50.1	40.4	34.5	25.2
Niagara U, IIA	35.6	29.7	25.1	—
Pace U, IIA	49.0	38.2	31.5	28.1
Pratt Inst, IIA	30.4	32.8	27.1	
Rensselaer Poly Inst, I	55.8	40.3	34.6	
Rockefeller U, I	74.4	42.8	28.9	25.3
Russell Sage C, IIA	37.9	28.8	24.7	19.9
Saint Bonaventure U, IIA	36.0	30.2	26.7	24.2
Saint Francis C, IIB	42.1	33.6	24.6	23.6
Saint Lawrence U, IIB	47.2	34.4	27.4	—
Saint Thomas Aquinas C, IIB	36.1	29.6	24.5	—
Siena C, IIB	37.4	28.4	23.9	
Skidmore C, IIB	45.8	33.5	27.1	21.2
St U of New York				
Albany, I	57.1	41.6	31.5	
Binghamton, I	55.4	39.7	30.0	
Buffalo, I	57.5	41.5	33.1	—
Stony Brook, I	58.1	40.6	30.8	—
Empire St C, IIB	41.2	35.2	27.7	25.9
C at Brockport, IIA	46.4	37.8	31.5	22.1
C at Buffalo, IIA	43.5	34.0	26.9	24.4
C at Cortland, IIA	43.2	33.3	26.9	21.5
C at Fredonia, IIA	44.9	34.9	28.2	21.8
C at Geneseo, IIA	45.0	35.2	25.7	23.1
C at New Paltz, IIA	43.8	36.5	29.5	—
C at Old Westbury, IIB	47.6	37.4	28.2	—
C at Oneonta, IIA	43.5	34.8	28.2	—
C at Oswego, IIA	43.5	33.6	26.3	24.4
C at Plattsburgh, IIA	43.3	35.9	28.1	22.4
C at Potsdam, IIA	42.8	32.8	28.2	20.5
C at Purchase, IIB	43.2	33.6	26.2	
St C of Optometry, IIA	51.7	42.4	31.4	—
A&T C				
Alfred, III	40.1	35.0	27.8	22.2
Canton, III	38.3	30.9	26.7	23.9
Cobleskill, III	39.7	31.4	26.9	22.9
Delhi, III	38.9	31.8	26.9	19.5
Farmingdale, III	42.5	32.8	26.6	23.3
Morrisville, III	40.4	32.8	25.9	22.2
C of Environmental Sci & Forestry, IIA	45.2	36.6	28.0	—
Maritime C, IIB	44.5	32.9	28.2	21.8
C of Tech, IIA	—	35.1	29.5	—
Fashion Inst of Tech, III	59.9	49.5	38.1	30.2
Cornell U Statutory C's, I	50.1	38.7	31.8	25.8
C of Ceramics at Alfred U, IIA	47.5	37.5	32.2	28.7
Adirondack CC, III	34.9	28.5	23.3	21.0
Cayuga County CC, III	33.3	25.9	21.7	—
Clinton CC, III	31.6	26.9	24.3	—
Columbia-Greene CC, III	34.6	29.4	23.2	20.4
CC of Finger Lake, III	31.3	26.6	22.5	18.8
Corning CC, III	36.9	27.5	21.3	—
Dutchess CC, III	43.5	37.1	29.6	23.1

NEW YORK—Continued

	Prof	Assoc Prof	Asst Prof	Inst
St U of New York				
Erie CC				
City, III	36.6	—	26.9	21.5
South, III	36.8	32.4	26.7	23.5
North, III	38.0	32.2	27.4	22.4
Fulton-Montgomery CC, III	35.9	31.6	26.2	20.2
Genesee CC, III	30.8	25.3	21.2	—
Hudson Valley CC, III	34.0	30.4	24.8	20.0
Jamestown CC, III	35.1	29.1	23.0	19.4
Jefferson CC, III	39.9	32.8	25.0	16.8
Monroe CC, III	39.4	33.8	28.0	23.5
Nassau CC, III	52.4	42.1	33.9	28.6
Niagara County CC, III	38.0	31.7	25.5	21.5
Onondaga CC, III	36.2	29.9	26.5	21.7
Rockland CC, III	36.7	33.3	25.3	18.9
Schenectady Co CC, III	33.8	27.1	21.5	—
Sullivan County CC, III	35.7	31.0	25.5	—
Tompkins-Cortland CC, III	33.0	26.2	23.0	18.8
Ulster County CC, III	37.0	30.7	26.7	22.4
Westchester CC, III	55.0	48.4	42.0	—
Syracuse U, I	46.8	33.8	28.2	24.8
Utica C, IIB	32.5	26.9	21.6	—
Trocaire C, III	—	—	19.6	17.5
Union C, IIA	45.8	35.3	26.5	24.8
U of Rochester, I	54.3	39.3	31.7	23.8
Vassar C, IIB	48.9	34.8	27.3	22.9
Wells C, IIB	30.9	25.8	21.1	—

NORTH CAROLINA

	Prof	Assoc Prof	Asst Prof	Inst
Appalachian St U, IIA	38.3	32.4	29.1	22.5
Atlantic Christian C, IIB	26.7	21.7	18.9	19.6
Belmont Abbey C, IIB	26.4	24.0	20.8	—
Catawba C, IIB	29.0	24.3	20.2	17.8
Davidson C, IIB	42.1	35.1	25.7	—
Duke U, I	57.4	40.2	32.0	31.7
East Carolina U, IIA	42.4	34.2	28.2	24.3
Elizabeth City St U, IIB	36.2	31.3	28.1	—
Elon C, IIB	30.6	25.3	22.5	18.4
Fayetteville St U, IIB	41.4	33.9	26.7	25.6
Greensboro C, IIB	27.7	22.8	—	—
High Point C, IIB	31.9	26.7	22.4	—
Johnson C Smith U, IIB	30.9	25.6	21.2	18.2
Lenoir-Rhyne C, IIB	29.5	26.4	23.1	—
Mars Hill C, IIB	27.2	24.1	21.5	17.6
Methodist C, IIB	26.6	21.8	20.4	19.5
NC A&T St U, IIA	41.0	35.4	29.4	25.0
NC Central U, IIA	42.7	33.8	29.4	27.1
NC Sch of the Arts, IIB				31.0
North Carolina St U, I	52.8	38.2	33.1	26.6
Pembroke St U, IIB	40.8	33.8	26.5	—
Pfeiffer C, IIB	23.6	23.7	19.0	—
Piedmont Bible C, IIB	15.2			
Saint Andrews Presbyterian C, IIB	33.0	27.6	21.8	—
Salem C, IIB	31.7	26.8	23.9	—
Southeastern Baptist Theol Sem, IIA	28.9	—	—	
U of North Carolina				
Asheville, IIB	42.2	33.1	28.3	—
Chapel Hill, I	53.2	38.5	31.4	28.1
Charlotte, IIA	42.1	35.0	29.3	
Greensboro, I	48.4	35.4	29.3	23.7
Wilmington, IIB	41.8	34.3	28.6	
Wake Forest U, IIA	45.4	35.1	27.3	20.9
Western Carolina U, IIA	40.3	34.4	28.2	23.5
Winston-Salem St U, IIB	37.9	30.3	27.6	22.2

NORTH DAKOTA

	Prof	Assoc Prof	Asst Prof	Inst
Dickinson St C, IIB	30.5	28.5	25.7	22.7
Jamestown C, IIB	27.5	25.7	20.3	18.2
Mayville St C, IIB	33.4	29.0	23.7	—
Minot St C, IIB	35.2	30.6	25.9	23.4
North Dakota St U, IIA	38.9	31.6	27.0	18.9
U of North Dakota, I	37.9	30.8	26.5	23.0
Valley City St C, IIB	32.9	30.5	25.2	24.1

OHIO

	Prof	Assoc Prof	Asst Prof	Inst
Air Force Inst of Tech, IIA	44.0	36.3	33.7	—
Antioch U, IIA	28.9	23.6	22.1	
Baldwin-Wallace C, IIB	33.0	27.8	23.0	—
Bluffton C, IIB	24.6	21.2	19.5	—
Bowling Green St U, I	46.6	36.4	29.3	21.1
Firelands, III	—	36.0	28.0	23.8
Capital U, IIB	33.0	25.4	22.3	20.3
Case Western Reserve U, I	51.2	36.6	31.1	22.5
Cedarville C, IIB	30.4	25.4	22.4	—
Clark Tech C, III	—	28.8	25.6	20.6
Cleveland St U, IIA	48.8	36.8	30.3	24.6
C of Mt Saint Joseph, IIB	28.3	24.8	21.4	19.7
C of Wooster, IIB	37.8	29.0	24.2	23.1
Denison U, IIB	40.7	32.5	25.4	21.7
Findlay C, IIB	30.3	26.7	21.1	19.6
Hebrew Union C, IIA	58.6	39.1	—	—
Heidelberg C, IIB	30.2	25.2	21.3	17.6
Hiram C, IIB	32.6	26.1	22.1	19.1
Jefferson Tech C, III		31.0	26.6	24.1
John Carroll U, IIA	38.2	31.8	26.8	24.4
Kent St U				
Main campus, I	45.1	35.0	29.0	22.7
Ashtabula, III	—	33.2	28.5	—
Liverpool, III		—	25.6	—
Salem, III	—	—	25.9	—
Stark, III	—	34.5	29.2	—
Trumbull, III	—	33.4	25.4	—
Tuscarawas, III	—	34.6	28.6	—
Kenyon C, IIB	47.5	34.9	25.7	21.4
Lakeland CC, III	36.7	35.1	34.3	30.0
Lorain County CC, III	—	35.4	28.9	23.1
Lourdes C, IIB		—	—	19.5
Marietta C, IIB	32.4	28.3	25.8	—
Miami U				
Hamilton, III	—	35.4	27.6	24.7
Middletown, III	—	34.5	28.4	30.7
Oxford, I	47.0	36.0	29.1	25.1
Mount Union C, IIB	33.7	26.9	23.5	21.0
Mount Vernon Nazarene C, IIB	27.2	24.0	20.7	—
Muskingum Area Tech C, III	—	26.6	24.0	21.6
Muskingum C, IIB	34.1	28.5	22.7	—
Notre Dame C, IIB	—	—	20.7	—
Oberlin C, IIB	45.1	33.3	26.8	24.2
Ohio C of Podiatric Med, IIB	—	43.4	35.4	
Ohio Dominican C, IIB	31.0	24.9	21.7	—
Ohio Northern U, IIB	36.0	29.0	25.7	21.5
Ohio St U				
Main campus, I	54.0	38.6	33.1	23.7
Ag Tech Inst, IIB		30.2	26.8	—
Lima, IIB		35.2	28.9	—
Mansfield, IIB	—	33.8	27.9	—

OHIO—Continued

	Prof	Assoc Prof	Asst Prof	Inst
Ohio St U				
Marion, IIB	—	35.0	25.9	—
Newark, IIB	—	33.8	31.2	—
Ohio U				
Athens, I	46.0	36.0	29.7	23.7
Belmont, III		—	30.5	
Chillicothe, III		30.7	27.2	—
Lancaster, III		33.4	25.8	
Zanesville, III	—	32.6	26.7	—
Ohio Wesleyan U, IIB	34.0	26.3	23.0	
Otterbein C, IIB	32.7	25.9	22.5	18.5
Rio Grande C, IIB	24.5	26.8	24.1	17.5
Trinity Lutheran Seminary, IIA	29.6	28.0	—	—
United Theol Sem, IIB	27.7	26.3		
U of Akron				
Main campus, I	46.8	36.0	30.7	25.6
Wayne General & Tech C, III	—	27.8	22.8	—
U of Cincinnati				
Main campus, I	50.7	38.1	29.5	22.4
Claremont General & Tech C, III	—	34.5	27.2	—
Raymond Walters General & Tech C, III	40.3	33.8	26.2	19.3
U of Dayton, IIA	39.8	34.0	26.8	17.3
U of Toledo, I	47.0	36.8	30.1	23.4
Ursuline C, IIB	—	—	21.7	19.8
Walsh C, IIB	29.7	25.1	22.5	—
Wilberforce U, IIB	—	20.5	16.8	14.3
Wilmington C, IIB	30.1	26.2	21.5	—
Wittenberg U, IIB	40.8	32.0	24.8	20.9
Wright St U				
Main campus, IIA	49.0	37.0	30.7	22.5
Lake, III	—	—	28.0	—
Xavier U, IIA	38.4	31.4	27.2	21.7
Youngstown St U, IIA	43.9	36.3	27.5	23.0

OKLAHOMA

	Prof	Assoc Prof	Asst Prof	Inst
Bacone C, III		—	17.1	15.1
Cameron U, IIB	33.9	29.9	25.6	18.6
Central St U, IIA	37.9	34.6	31.7	26.8
East Central U, IIB	35.8	32.9	28.5	22.8
Langston U, IIB	33.2	26.1	24.8	24.3
Oklahoma Baptist U, IIB	29.5	24.9	21.9	19.3
Okla Christian C, IIB	32.6	29.0	23.1	19.6
Oklahoma St U, I	40.0	31.8	27.7	22.2
Phillips U, IIB	27.3	23.5	20.4	—
SE Oklahoma St U, IIA	33.5	30.7	26.6	22.5
U of Oklahoma, I	41.4	31.4	27.0	17.5
U of Tulsa, IIA	47.8	34.7	27.7	19.8

OREGON

	Prof	Assoc Prof	Asst Prof	Inst
Eastern Oregon St C, IIB	34.1	27.7	23.6	—
George Fox C, IIB	25.5	21.7	17.9	—
Lewis and Clark C, IIA	44.5	30.8	22.6	—
Linfield C, IIB	30.2	26.1	21.6	—
Oregon Inst of Tech, IIB	36.8	31.6	27.1	23.1
Oregon St U, I	41.6	33.5	28.0	20.2
Portland St U, IIA	38.0	30.5	27.8	22.2
Reed C, IIA	41.1	31.5	25.9	
Southern Ore St C, IIA	35.1	28.2	23.0	—
U of Oregon, I	41.1	32.0	26.7	20.5
U of Portland, IIA	36.9	29.6	25.1	
Warner Pacific C, IIB	—	23.5	21.1	
Western Baptist C, IIB	20.3	—		—
Western Ore St C, IIA	32.5	28.1	23.7	—
W St Chiropractic C, IIA	—	—	22.2	
Willamette U, IIA	39.4	29.6	25.5	—

PENNSYLVANIA

	Prof	Assoc Prof	Asst Prof	Inst
Academy of the New Church, IIB	—	—	33.0	26.8
Albright C, IIB	39.0	31.2	26.8	24.8
Allegheny C, IIA	41.1	31.7	25.3	21.1
Allentown C of Saint Francis, IIB	34.7	30.0	24.5	18.9
Alvernia C, IIB	—	20.5	18.4	16.1
Beaver C, IIB	37.3	27.3	23.5	16.3
Bryn Mawr C, I	44.1	35.4	26.6	—
Bucknell U, IIA	47.6	36.7	28.9	—
Carlow C, IIB	34.2	24.9	19.6	17.2
Carnegie Mellon U, I	60.1	40.8	36.1	35.7
CC of Allegheny County				
Allegheny, III	33.9	31.0	27.7	—
Boyce, III	35.3	30.7	27.3	—
North, III	28.4	26.1	22.8	—
South, III	34.1	29.5	23.1	—
Cedar Crest C, IIB	30.2	24.5	21.1	—
Chatham C, IIB	35.1	29.1	23.0	20.4
Chestnut Hill C, IIB	—	25.8	18.4	—
Clarion U, IIA	41.2	33.4	27.1	21.0
C Misericordia, IIB	—	26.0	21.7	—
Dickinson C, IIB	42.4	32.6	25.7	22.7
Drexel U, I	50.6	36.1	31.9	25.4
Duquesne U, IIA	37.2	28.9	24.7	19.0
Eastern Baptist Theol Sem, IIB	29.6	—	—	
Eastern C, IIB	31.1	27.2	23.7	22.2
Edinboro U, IIA	40.7	33.7	27.4	—
Franklin and Marshall C, IIB	48.1	36.4	25.3	23.7
Gannon U, IIA	35.8	31.9	27.6	21.8
Geneva C, IIB	28.6	25.2	21.1	—
Gettysburg C, IIB	46.0	34.7	26.0	27.8
Harrisburg Area CC, III	36.0	30.1	23.2	20.8
Haverford C, IIB	49.0	36.9	29.1	—
Immaculata C, IIB	33.1	29.8	—	—
Indiana U, IIA	41.1	33.4	26.4	19.4
Juniata C, IIB	36.8	28.4	24.4	—
Keystone JC, III	27.9	22.9	19.7	17.0
King's C, IIB	34.6	30.0	25.1	—
La Salle U, IIB	42.1	34.4	27.8	23.0
Lackawanna JC, III	—	—	16.9	13.4
Lafayette C, IIB	51.3	37.8	28.4	26.8
Lancaster Bible C, IIB	—	—	17.5	—
Lebanon Valley C, IIB	29.0	27.6	22.4	—
Lehigh U, I	50.8	37.3	30.8	33.1
Lock Haven U, IIB	42.1	34.5	25.6	21.8
Lutheran Theol Sem, IIA	25.5	—	—	—
Lycoming C, IIB	35.4	29.1	23.8	22.0
Marywood C, IIA	31.7	27.7	23.3	19.9
Mercyhurst C, IIB	31.2	26.5	22.0	20.3
Millersville U, IIA	40.7	33.3	26.6	21.7
Montgomery Co CC, III	37.9	32.6	27.0	—
Moravian C, IIB	36.7	29.1	24.5	—
Muhlenberg C, IIB	40.8	31.7	25.5	—
Neumann C, IIB	—	23.5	21.9	20.5
Northampton County Area CC, III	31.8	29.5	25.5	—
Peirce JC, III	29.5	25.9	22.0	18.6
Pennsylvania St U				
Main campus, I	50.4	36.8	30.5	19.6
IIA campuses	42.9	36.9	30.1	25.5
III campuses	40.6	31.8	26.1	21.4

Regional Differences in This Year's Average Faculty Salaries

	West		North Central		Northeast		South			
	Pacific	Mountain	West North Central	East North Central	Middle Atlantic	New England	West South Central	East South Central	South Atlantic	All
Doctoral institutions										
Professor	$56,610	$44,020	$44,380	$49,580	$55,680	$55,700	$46,120	$44,500	$50,540	$50,500
Associate professor	38,030	33,650	33,030	36,500	39,400	38,210	33,770	33,340	36,740	36,210
Assistant professor	32,990	28,630	28,420	30,580	31,880	31,750	28,790	27,950	30,670	30,360
Instructor	22,090	22,610	20,830	21,860	23,570	25,420	21,110	20,620	23,220	22,130
Lecturer	31,820	24,060	19,900	23,790	25,730	29,370	22,160	20,750	24,800	26,090
All ranks	45,520	36,490	36,340	39,580	43,390	43,950	35,810	35,160	39,080	39,800
Comprehensive institutions										
Professor	$47,380	$37,810	$38,190	$39,730	$43,290	$44,420	$37,410	$37,410	$41,150	$42,160
Associate professor	36,130	31,360	31,190	32,790	34,540	34,030	31,150	30,810	33,530	33,200
Assistant professor	29,440	26,390	26,190	27,480	28,220	27,920	26,810	28,850	28,230	27,310
Instructor	25,040	22,130	21,050	22,030	22,500	21,980	21,040	21,070	21,870	21,220
Lecturer	25,600	24,960	19,440	22,120	25,340	28,320	19,340	18,500	23,610	22,790
All ranks	41,050	31,160	30,610	32,690	34,960	35,410	30,030	30,260	32,890	33,750
Baccalaureate institutions										
Professor	$40,020	$35,000	$33,890	$34,770	$40,140	$43,790	$32,830	$31,820	$34,150	$36,170
Associate professor	30,590	28,210	27,600	28,700	31,230	32,280	28,220	26,080	28,520	29,210
Assistant professor	25,120	23,760	23,170	23,720	25,200	26,550	24,720	22,400	23,920	24,070
Instructor	21,720	19,630	20,270	19,740	20,990	22,130	20,970	17,980	20,290	19,840
Lecturer	19,430	—	22,060	20,000	23,520	30,030	21,470	20,200	23,360	23,240
All ranks	31,290	29,080	26,850	28,070	30,560	33,030	27,220	25,730	27,660	28,480
2-year institutions with academic ranks										
Professor	$40,690	$28,940	$37,640	$38,170	$39,500	$33,200	$36,500	$30,780	$36,670	$37,170
Associate professor	37,800	26,730	31,720	33,360	32,480	28,080	30,280	26,390	30,300	31,330
Assistant professor	33,000	24,160	26,110	28,820	27,200	24,260	26,500	22,710	25,840	26,590
Instructor	30,800	22,660	23,470	25,160	22,390	21,710	23,650	[illegible]	21,300	22,270
Lecturer	—	—	—	20,600	18,930	16,870	—	—	19,720	19,540
All ranks	37,230	25,090	31,020	31,610	32,210	28,260	28,550	24,860	29,920	30,100
2-year institutions without academic ranks										
All	$31,790	$27,530	$26,510	$31,470	$17,040	$23,570	$26,220	$21,930	$23,590	$31,240
All institutions except 2-year institutions without academic rank										
Professor	$51,050	$41,520	$40,470	$44,820	$48,080	$49,660	$42,340	$39,620	$44,860	$45,530
Associate professor	36,580	32,220	31,130	34,050	35,370	35,190	32,350	30,790	33,990	33,820
Assistant professor	30,770	27,210	26,040	28,440	28,590	28,900	27,350	25,820	28,210	27,920
Instructor	23,850	22,200	29,810	21,890	22,360	22,690	21,210	20,410	21,800	21,330
Lecturer	31,250	24,200	20,010	22,830	25,260	29,140	21,660	19,660	24,080	24,930
All ranks	42,370	33,820	31,990	35,470	37,030	38,490	32,880	31,140	34,690	35,470

— No data reported.

Note: Salary figures are based on 1,875 institutions.
Pacific: Alaska, Cal., Hawaii, Ore., Wash.; Mountain: Ariz., Colo., Idaho, Mont., Nev., N.M., Utah, Wyo.; West North Central: Iowa, Kan., Minn., Mo., Neb., N.D., S.D.; East North Central: Ill., Ind., Mich., Ohio, Wis.; Middle Atlantic: N.J., N.Y., Pa.; New England: Conn., Me., Mass., N.H., R.I., Vt.; West South Central: Ark., La., Okla., Tex.; East South Central: Ala., Ky., Miss., Tenn.; South Atlantic: Del., D.C., Fla., Ga., Md., N.C., S.C., Va., W.Va.

SOURCE: AMERICAN ASSOCIATION OF UNIVERSITY PROFESSORS

PENNSYLVANIA—Continued

	Prof	Assoc Prof	Asst Prof	Inst
Philadelphia C of Pharmacy & Sci, IIA	43.4	32.7	25.7	21.5
Philadelphia C of Textiles & Sci, IIA	38.7	32.6	27.9	—
Point Park C, IIB	30.4	26.2	20.9	18.8
Rosemont C, IIB	31.7	29.2	19.3	—
Saint Joseph's U, IIB	42.5	33.0	28.3	22.5
Seton Hill C, IIB	30.2	24.4	19.4	16.0
Shippensburg U, IIA	41.1	33.3	27.1	—
Susquehanna U, IIB	37.7	29.7	24.2	—
Swarthmore C, IIB	50.5	34.2	27.5	—
Temple U, I	48.3	36.2	30.0	22.6
Thiel C, IIB	30.2	25.0	21.4	—
U of Pennsylvania, I	59.6	43.3	35.8	—
U of Pittsburgh				
Main campus, I	51.5	36.4	29.4	19.6
Bradford, IIB	—	29.6	26.0	19.2
Greensburg, III	32.9	27.0	23.9	17.2
Johnstown, IIB	39.2	32.4	25.8	21.0
Titusville, III		29.4	—	—
U of Scranton, IIA	37.6	30.9	26.9	22.8
Ursinus C, IIB	37.9	31.5	25.7	—
Villa Maria C, IIB	—	21.9	18.7	17.8
Villanova U, IIA	47.2	36.8	30.4	21.5
Washington and Jefferson C, IIB	34.8	30.9	25.6	19.6
Westminster C, IIB	33.0	27.5	22.4	—
Westmoreland Co CC, III	—	28.3	24.7	22.8
Widener U, IIA	43.3	36.8	28.7	25.5
Wilkes C, IIA	34.5	26.8	23.6	19.3
Williamsport Area CC, III	30.5	29.5	28.0	25.2
York C of Pa, IIB	43.3	36.8	28.5	23.8

RHODE ISLAND

	Prof	Assoc Prof	Asst Prof	Inst
Brown U, I	53.3	36.7	30.4	—
Bryant C, IIA	43.7	40.4	31.5	27.1
CC of Rhode Island, III	32.5	27.7	22.7	—
Providence C, IIA	41.4	36.8	27.4	27.5
Rhode Island C, IIA	37.5	31.6	26.6	21.7
RI Sch of Design, IIB	40.1	32.0	25.6	—
Salve Regina-Newport C, IIA	34.7	28.7	24.4	19.8
U of Rhode Island, I	43.5	34.2	29.9	22.2

SOUTH CAROLINA

	Prof	Assoc Prof	Asst Prof	Inst
Baptist C of Charleston, IIB	23.4	20.5	18.8	—
Central Wesleyan C, IIB	20.9	17.8	14.6	—
Citadel, IIA	39.7	31.8	28.5	—
Clemson U, I	46.3	34.4	29.6	20.7
Coker C, IIB	26.7	23.8	21.3	—
C of Charleston, IIA	38.6	33.8	26.5	19.5
Columbia C, IIB	29.4	24.3	22.9	19.8
Converse C, IIB	31.6	27.8	23.9	22.3
Erskine C, IIB	26.3	21.4	18.3	—
Francis Marion C, IIB	37.1	29.4	24.9	18.3
Furman U, IIB	39.2	29.5	24.7	21.2
Lander C, IIB	35.9	31.0	26.2	20.2
Limestone C, IIB	21.9	21.0	21.6	—

SOUTH CAROLINA—Continued

	Prof	Assoc Prof	Asst Prof	Inst
Morris C, IIB	23.1	21.9	18.2	16.1
Newberry C, IIB	25.1	22.7	19.7	—
North Greenville C, III	—	—	17.9	15.7
Presbyterian C, IIB	34.6	27.2	23.3	20.1
South Carolina St C, IIB	38.8	31.8	26.4	21.4
U of South Carolina				
Main campus, I	46.1	33.2	28.9	21.2
Aiken, IIB	34.6	28.0	23.6	18.7
Beaufort, III	—	26.3	—	—
Coastal, IIB	34.3	28.5	26.1	22.5
Lancaster, III	—	27.3	24.6	—
Salkehatchie, III	—	—	22.8	—
Spartanburg, IIB	33.9	29.4	24.1	21.4
Sumter, III	—	28.7	25.3	—
Union, III	—	—	—	20.8
Voorhees C, IIB	22.8	—	18.4	15.8
Winthrop C, IIA	39.9	32.5	26.5	19.7
Wofford C, IIB	38.2	29.8	25.4	—

SOUTH DAKOTA

	Prof	Assoc Prof	Asst Prof	Inst
Black Hills St C, IIB	31.8	27.3	23.9	19.2
Mount Marty C, IIB	25.9	20.7	17.9	—
Northern St C, IIA	34.6	28.0	24.2	21.1
Sioux Falls C, IIB	24.9	22.4	20.7	—
SD Sch of Mines & Tech, IIA	36.8	29.9	26.2	21.1
South Dakota St U, IIA	34.2	28.3	24.1	21.4
U of South Dakota, I	37.7	29.0	24.8	18.8

TENNESSEE

	Prof	Assoc Prof	Asst Prof	Inst
Austin Peay St U, IIA	35.0	27.4	23.0	18.0
Belmont C, IIB	31.6	25.7	23.2	22.2
Bethel C, IIB	—	20.3	19.4	—
Bryan C, IIB	—	21.1	19.0	—
Carson-Newman C, IIB	30.2	24.8	23.0	—
Chattanooga St Tech CC, III	34.8	31.0	28.8	22.4
Christian Brothers C, IIB	34.0	25.9	24.4	
Cleveland St CC, III	30.2	26.5	23.6	
Columbia St CC, III	—	30.7	27.6	22.0
David Lipscomb C, IIB	32.0	26.9	23.1	19.5
Dyersburg St CC, III	26.8	26.1	22.6	20.6
East Tennessee St U, IIA	38.8	32.6	26.9	21.1
Freed-Hardeman C, IIB	31.8	27.3	23.1	17.0
Hiwassee C, III	19.0	18.2	16.6	15.6
Jackson St CC, III	30.1	27.2	24.0	20.0
Lambuth C, IIB	24.9	23.7	21.2	
Lane C, IIB	21.2	18.8	17.9	16.1
Lee C, IIB	27.8	23.3	20.4	17.9
Maryville C, IIB	27.0	22.6	20.8	16.9
Middle Tenn St U, IIA	41.5	34.5	27.4	21.5
Rhodes C, IIB	40.0	31.3	23.9	—
Roane St CC, III	32.6	27.2	22.8	18.2
St Tech Inst Memphis, III	32.2	26.8	23.4	20.8
Tennessee Tech U, IIA	40.8	33.0	27.5	20.8
Tusculum C, IIB	21.1	—	18.3	—
Union U, IIB	28.8	24.6	21.7	18.9
U of Tennessee				
Chattanooga, IIA	38.6	31.8	27.3	20.2

TENNESSEE—Continued

	Prof	Assoc Prof	Asst Prof	Inst
U of Tennessee				
Inst of Ag, IIA	43.5	38.3	30.7	20.8
Knoxville, I	45.6	33.3	29.1	21.2
Martin, IIB	35.7	30.6	26.6	21.5
U of the South, IIA	40.4	30.1	25.5	—
Vanderbilt U, I	54.7	37.7	29.9	29.4
Volunteer St CC, III	31.4	26.7	22.9	19.4

TEXAS

	Prof	Assoc Prof	Asst Prof	Inst
Abilene Christian U, IIA	32.9	28.3	24.4	19.0
Angelo St U, IIA	36.2	32.7	26.9	21.2
Austin C, IIB	38.1	29.6	25.6	—
Baylor U, I	46.0	36.3	29.9	23.5
Bishop C, IIB	24.2	24.6	24.0	—
Corpus Christi St U, IIA	36.5	28.8	23.5	—
Del Mar C, III	37.9	32.3	29.1	24.7
East Texas St U, IIA	37.1	29.4	25.9	22.5
Texarkana, IIB	37.4	32.8	—	—
Hardin-Simmons U, IIA	33.2	26.9	24.1	20.6
Houston Baptist U, IIA	30.1	28.9	24.4	22.1
Incarnate Word C, IIB	29.3	26.0	20.6	
Jarvis Christian C, IIB	29.7	23.9	19.8	16.7
Lamar U Orange Ctr, III		—	23.3	18.3
Lubbock Christian C, IIB	23.1	20.3	16.3	—
McMurry C, IIB	28.1	24.6	24.0	20.8
Midwestern St U, IIA	38.0	30.8	24.2	19.5
North Texas St U, I	39.9	32.2	28.1	21.9
Odessa C, III	37.6	30.8	27.9	26.9
Our Lady of the Lake U, IIA	33.0	27.5	23.8	19.5
Pan American U, IIA	39.4	31.5	26.1	20.8
Prairie View A&M U, IIA	37.7	32.2	27.1	24.0
Rice U, I	55.9	39.3	31.8	22.9
S F Austin St U, IIA	37.3	31.1	25.5	19.9
Saint Mary's U, IIA	41.3	30.0	26.6	—
Sam Houston St U, IIA	37.5	31.9	26.4	22.8
San Antonio C, III	34.6	31.3	27.8	24.3
Schreiner C, III	29.0	—	21.1	17.9
Southern Methodist U, I	54.8	37.2	31.3	21.3
Southwest Tex St U, IIA	37.6	31.2	24.6	19.1
SW Assemblies of God C, IIB	—	—	19.7	—
Southwestern U, IIB	45.0	34.3	27.4	25.8
Sul Ross St U, IIA	34.1	29.1	23.3	19.2
Tarleton St U, IIA	34.1	[illegible]	25.5	20.7
Texas A&I U, IIA	[illegible]	[illegible]	25.6	17.9
Texas A&M U				
Main campus, I	46.7	35.3	29.0	19.3
Galveston, IIB	—	28.1	24.5	
Texas Christian U, I	47.3	35.6	30.1	26.4
Texas Lutheran C, IIB	32.6	26.8	24.9	—
Texas Southern U, I	35.1	31.0	20.3	16.7
Texas Tech U, I	43.2	32.5	27.0	19.3
Texas Wesleyan C, IIB	29.7	26.2	24.5	—
Texas Woman's U, I	38.9	30.9	25.3	22.3
Trinity U, IIA	48.7	35.7	28.2	—
U of Dallas, IIA	33.1	30.2	27.6	—
U of Houston				
Clear Lake, IIA	40.6	33.9	30.3	24.2
Downtown, IIB	40.2	32.2	28.2	—

TEXAS—Continued

	Prof	Assoc Prof	Asst Prof	Inst
U of Houston U Park, I	47.8	34.0	29.2	24.9
U of Saint Thomas, IIA	27.7	25.3	22.7	—
U of Texas				
Arlington, I	42.5	32.0	27.4	—
Austin, I	49.7	34.0	29.9	22.6
Dallas, I	48.1	34.0	30.3	—
Permian Basin, IIA	35.2	28.6	25.3	—
San Antonio, IIA	38.9	31.4	26.3	—
Tyler, IIA	39.0	32.1	25.7	22.4
West Texas St U, IIA	35.7	29.1	24.7	20.8

UTAH

	Prof	Assoc Prof	Asst Prof	Inst
Dixie C, III	—	28.8	28.1	18.9
Snow C, III	31.4	27.9	24.4	21.5
Southern Utah St C, IIB	33.3	26.8	23.5	20.2
U of Utah, I	44.5	31.6	28.0	22.6
Utah St U, I	40.4	31.7	26.0	22.5
Utah Tech C at Salt Lake, III	29.0	25.4	23.1	22.0
Weber St C, IIA	35.5	29.4	25.7	20.9

VERMONT

	Prof	Assoc Prof	Asst Prof	Inst
Champlain C, III	30.5	25.8	24.9	18.6
Green Mountain C, IIB	26.3	24.0	21.6	—
Lyndon St C, IIB	32.5	28.3	25.0	—
Middlebury C, IIB	50.3	35.4	28.8	27.3
Norwich U, IIA	33.3	26.8	24.2	18.5
Saint Michael's C, IIB	36.3	29.6	23.1	—
U of Vermont, I	46.1	34.3	28.1	22.7

VIRGINIA

	Prof	Assoc Prof	Asst Prof	Inst
Averett C, IIB	26.9	24.1	21.3	—
Blue Ridge CC, III	—	30.5	26.9	22.5
Bridgewater C, IIB	29.9	24.7	21.8	—
Central Virginia CC, III	35.6	31.8	27.9	—
Christendom C, IIB		—	25.0	
Christopher Newport C, IIB	35.5	31.3	28.4	23.6
C of William and Mary, I	47.0	38.8	30.2	24.3
Richard Bland C, III	—	29.0	—	—
Dabney Lancaster CC, III	—	34.9	26.9	23.5
Danville CC, III	31.4	30.1	25.8	—
E Mennonite C, IIB	23.9	21.6	18.9	—
Emory and Henry C, IIB	30.8	26.1	23.4	—
Ferrum C, IIB	26.9	22.8	20.0	—
George Mason U, IIA	47.8	36.3	31.0	25.5
Germanna CC, III	—	31.7	25.5	21.1
Hampden-Sydney C, IIB	36.9	30.1	25.0	
Hollins C, IIB	40.1	32.6	23.7	—
J Sergeant Reynolds CC, III	33.6	31.5	26.6	23.8
James Madison U, IIA	39.4	33.8	29.3	21.6
John Tyler CC, III	33.1	30.3	25.3	23.2
Longwood C, IIB	38.9	33.1	25.9	23.0
Lord Fairfax CC, III	—	27.0	25.4	—
Lynchburg C, IIA	34.5	28.2	23.3	—
Mary Baldwin C, IIB	31.6	24.1	23.2	22.0

Continued on Following Page

FACT-FILE—Continued

VIRGINIA—Continued

	Prof	Assoc Prof	Asst Prof	Inst
Mary Washington C, IIA	37.8	33.4	26.2	23.1
Marymount U, IIB	37.5	27.9	23.6	18.3
Mountain Empire CC, III	—	29.9	25.6	22.5
New River CC, III	35.9	31.5	26.2	21.1
Norfolk St U, IIA	40.4	35.4	29.4	22.1
Northern Virginia CC, III	35.9	32.7	28.2	24.4
Old Dominion U, IIA	48.0	35.7	30.8	23.8
Patrick Henry CC, III	—	30.4	26.0	—
Paul D Camp CC, III	—	29.4	24.6	—
Piedmont Virginia CC, III	33.8	28.9	25.3	—
Presbyterian Sch				
of Christian Ed, IIB	30.3	—	—	—
Radford U, IIA	39.6	33.0	27.3	21.7
Randolph-Macon C, IIB	36.6	29.6	24.8	—
Randolph-Macon				
Woman's C, IIB	37.7	28.1	23.3	—
Rappahannock CC, III	—	31.6	25.0	—
Roanoke C, IIB	37.7	29.2	24.5	—
Shenandoah C				
& Conserv of Music, IIB	26.3	24.0	19.1	—
Southside Va CC, III	—	28.1	25.3	—
Southwest Va CC, III	33.7	30.6	27.2	23.7
Sweet Briar C, IIB	38.3	30.3	23.9	—
Thomas Nelson CC, III	34.6	29.9	26.5	22.6
Tidewater CC, III	31.8	28.9	25.6	22.6
U of Richmond, IIA	45.5	35.0	27.8	19.7
U of Virginia, I	59.0	39.9	32.0	23.1

VIRGINIA—Continued

	Prof	Assoc Prof	Asst Prof	Inst
U of Virginia				
Clinch Valley C, IIB	36.8	29.8	24.8	—
Va Commonwealth U, I	45.5	37.4	31.7	23.8
Va Highlands CC, III	—	30.3	26.2	—
Virginia Military Inst, IIB	42.0	36.8	29.4	—
Va Poly Inst				
& St U, I	54.0	38.3	33.1	22.7
Virginia St U, IIA	37.5	32.7	29.5	24.4
Virginia Wesleyan C, IIB	34.3	29.8	22.9	22.5
Virginia Western CC, III	35.7	31.2	26.5	22.3
Washington & Lee U, IIB	44.4	33.1	26.6	21.1
Wytheville CC, III	33.3	30.0	25.7	23.7

WASHINGTON

	Prof	Assoc Prof	Asst Prof	Inst
Central Wash U, IIA	36.5	30.8	25.1	—
Pacific Lutheran U, IIA	36.2	29.4	24.4	—
Saint Martin's C, IIB	—	23.7	20.9	—
Seattle Pacific U, IIB	33.1	27.7	24.1	19.9
Seattle U, IIA	36.6	29.4	25.9	22.9
U of Puget Sound, IIA	39.9	31.6	25.7	21.9
U of Washington, I	47.9	33.7	30.7	—
Washington St U, I	42.2	32.1	28.5	22.5
Western Wash U, IIA	34.2	31.7	26.9	—
Whitman C, IIB	39.0	32.6	25.7	22.3
Whitworth C, IIB	34.2	27.9	23.0	17.4

WEST VIRGINIA

	Prof	Assoc Prof	Asst Prof	Inst
Alderson				
Broaddus C, IIB	27.1	22.9	19.0	17.3
Bethany C, IIB	28.1	22.3	21.5	—
Bluefield St C, IIB	29.7	25.2	20.6	19.2
Concord C, IIB	31.3	26.6	21.9	18.5
Davis & Elkins C, IIB	27.6	23.4	20.6	17.5
Fairmont St C, IIB	31.1	27.2	22.9	23.1
Glenville St C, IIB	29.9	25.5	21.8	19.7
Marshall U, IIA	34.0	28.8	23.3	17.7
Shepherd C, IIB	32.2	27.2	24.3	20.6
West Liberty St C, IIB	31.3	25.8	21.0	18.7
West Virginia C				
of Grad Studies, IIA	37.0	32.5	—	
West Va Inst of Tech, IIB	26.6	27.8	23.8	20.1
West Va Northern CC, III	29.1	23.8	20.3	16.3
West Virginia U, I	39.8	32.0	26.0	19.4
Potomac St C, III	32.7	25.8	21.5	17.6
West Va Wesleyan C, IIB	28.2	24.4	22.0	—

WISCONSIN

	Prof	Assoc Prof	Asst Prof	Inst
Alverno C, IIB	29.9	25.9	21.3	18.4
Beloit C, IIB	35.3	29.4	24.2	—
Carroll C, IIB	35.9	30.3	26.7	
Carthage C, IIB	30.0	23.6	22.7	17.3
Concordia C of Wis, IIB	—	21.3	19.6	—
Edgewood C, IIB	29.6	22.7	20.2	—

WISCONSIN—Continued

	Prof	Assoc Prof	Asst Prof	Inst
Inst of				
Paper Chemistry, IIA	52.9	40.0	33.0	—
Lakeland C, IIB	26.5	21.7	20.8	—
Lawrence U, IIB	42.2	33.1	24.9	
Marquette U, I	49.3	36.9	30.8	
Milwaukee Sch				
of Engineering, IIB	34.8	26.7	25.8	23.8
Mount Mary C, IIA	—	25.4	20.4	—
Mount Senario C, IIB	—	18.4	16.4	14.5
Northland C, IIB	23.2	—	19.4	—
Ripon C, IIB	38.7	29.8	25.0	—
Saint Norbert C, IIB	38.8	31.8	24.9	—
U of Wisconsin				
Centers, III	35.8	30.1	24.8	21.5
Eau Claire, IIA	39.0	31.1	27.2	23.4
Green Bay, IIA	40.3	32.1	27.3	—
La Crosse, IIA	39.0	34.4	29.1	27.2
Madison, I	49.3	36.1	32.8	26.4
Milwaukee, I	46.8	34.7	30.2	27.7
Oshkosh, IIA	40.4	34.0	29.5	24.0
Parkside, IIA	42.3	32.3	28.2	
Platteville, IIA	38.5	33.1	29.1	—
River Falls, IIA	37.4	29.7	26.8	—
Stevens Point, IIA	38.8	31.4	27.3	22.6
Stout, IIA	37.9	31.5	26.7	24.5
Superior, IIA	40.6	31.1	26.7	—
Whitewater, IIA	39.5	32.9	28.8	25.1

WISCONSIN—Continued

	Prof	Assoc Prof	Asst Prof	Inst
Viterbo C, IIB	—	25.9	21.1	19.7

WYOMING

	Prof	Assoc Prof	Asst Prof	Inst
Central Wyoming C, III	31.6	—	26.3	23.8
Northwest CC, III	—	31.7	25.6	22.3
U of Wyoming, I	43.4	32.4	28.1	—
Western Wyo CC, III	37.6	34.5	30.6	25.3

PUERTO RICO

	Prof	Assoc Prof	Asst Prof	Inst
Antillian C, IIB	—	—	15.6	14.0
Arecibo Tech U C, III	26.2	22.8	18.9	16.5
Catholic U of PR, IIB	18.4	16.5	13.5	11.7
Inter American U				
of Puerto Rico, IIA	20.3	17.6	15.2	13.2
Mendez Ed Fdn Sys				
Puerto Rico JC, III		—	14.9	12.5
U of Turabo, IIB	22.3	17.7	15.5	11.5
U Metropolitan, IIB	—	—	15.4	9.8
U of Puerto Rico				
Cayey U C, IIB	30.0	23.1	18.9	16.3
Humacao U C, IIB	28.4	23.5	19.5	16.2
Ponce Tech U C, III	—	17.9	15.7	13.0
Rio Piedras, IIA	29.4	23.8	19.8	16.3
U of Sacred Heart, IIB	23.6	19.4	16.4	13.6

GUAM

	Prof	Assoc Prof	Asst Prof	Inst
U of Guam, IIA	40.8	34.8	26.4	21.3

2-Year and 4-Year Institutions Without Academic Ranks

ALABAMA

Alabama Aviation & Tech C, IV	27.7
Alabama Tech C, IV	26.8
Alexander City St JC, IV	29.0
Atmore St Tech Inst, IV	24.5
Ayers St Tech C, IV	31.2
Bessemer St Tech C, IV	30.3
Bishop St JC, IV	25.9
Brewer St JC IV	27.8
Calhoun St CC, IV	27.5
Carver St Tech C, IV	29.2
Chattahoochee Valley	
St CC, IV	28.1
Drake St Tech C, IV	29.1
Enterprise St JC, IV	27.7
Faulkner St JC, IV	29.0
Freed St Tech C, IV	31.3
Gadsden St JC, IV	27.1
G C Wallace St CC, IV	26.6
Dothan, IV	29.1
Selma, IV	28.7
Hobson St Tech C, IV	30.5
Ingram St Tech Inst, IV	30.5
Jefferson Davis St JC, IV	26.9
Jefferson St JC, IV	29.3
Lawson St CC, IV	28.5
L B Wallace St JC, IV	26.5
MacArthur St Tech C, IV	28.3
Muscle Shoals St Tech C, IV	29.2
Nunnelley St Tech C, IV	27.3
Northeast Alabama St JC, IV	27.4
Northwest Alabama St JC, IV	26.3
Northwest Ala St Tech C, IV	30.8
Opelika St Tech C, IV	29.5
Patterson St Tech C, IV	30.3
Patrick Henry St JC, IV	28.0
Reid St Tech C, IV	27.9
Shelton St CC, IV	29.4
Snead St JC, IV	28.3
Southern Union St JC, IV	27.7
Southwest St Tech C, IV	31.8
Sparks St Tech C, IV	30.8
Trenholm St Tech C, IV	30.3
Walker C, IV	25.2
Walker St Tech C, IV	27.9

ALASKA

U of Alaska	
Anchorage CC, IV	45.0
Islands CC, IV	40.8
Kenai Peninsula CC, IV	43.7
Ketchikan CC, IV	39.9
Kuskokwim CC, IV	55.7
Matanuska-Susitna CC, IV	40.8
Northwest CC, IV	55.2
Prince William Sound CC, IV	39.9
Tanana Valley CC, IV	43.7

ARIZONA

Arizona Western C, IV	29.8
Cochise C, IV	27.7
Eastern Arizona C, IV	31.0
Mohave CC, IV	26.4
Northland Pioneer C, IV	27.6
Pima CC, IV	28.4
Yavapai C, IV	31.6

ARKANSAS

S Ark U Tech Branch, IV	23.1
Southern Baptist C, IV	16.3

CALIFORNIA

Allan Hancock C, IV	34.5
Antelope Valley C, IV	36.1
Barstow C, IV	35.1
Butte C, IV	36.7
Cabrillo C, IV	29.0
California Inst of the Arts, IIA	28.7
Cerritos C, IV	41.7
Chabot C, IV	38.3
Chaffey C, IV	35.7
Citrus C, IV	40.4
City C of San Francisco, IV	37.3
Coast CC Dist, IV	39.7
C of the Canyons, IV	37.4
C of the Desert, IV	35.3
C of the Redwoods, IV	38.0
C of the Sequoias, IV	38.6
Compton CC, IV	30.9
Contra Costa CC Dist, IV	44.1
Cuesta C, IV	38.0
El Camino C, IV	40.2
Foothill-De Anza CC Dist, IV	44.5
Fresno Pacific C, IIB	23.3
Gavilan C, IV	36.8

CALIFORNIA—Continued

Glendale CC Dist, IV	38.1
Grossmont C, IV	36.1
Hartnell C, IV	35.6
Imperial Valley C, IV	32.2
Kern CC Dist, IV	35.2
Lake Tahoe CC, IV	35.2
Lassen C, IV	32.5
Long Beach City C, IV	42.3
Los Angeles CC Dist, IV	38.3
Los Rios CC Dist, IV	35.8
Marin CC Dist, IV	38.4
Mendocino-Lake CC Dist, IV	35.0
Menlo C, IIB	32.8
Merced C, IV	35.4
Mira Costa C, IV	39.0
Monterey Peninsula C, IV	34.5
Mount San Antonio C, IV	40.5
Mount San Jacinto C, IV	35.0
Napa Valley C, IV	34.1
North Orange Co CC Dist, IV	40.0
Pacific Oaks C, IIA	22.3
Palo Verde C, IV	35.3
Pasadena Area CC Dist, IV	38.5
Peralta CC's Dist, IV	37.0
Rancho Santiago C, IV	39.9
Rio Hondo C, IV	40.7
Riverside City C, IV	37.1
Saddleback CC Dist, IV	41.8
San Diego CC Dist, IV	31.1
San Joaquin Delta C, IV	43.9
San Jose CC Dist, IV	38.9
San Mateo CC Dist, IV	39.3
Santa Barbara City C, IV	34.5
Santa Monica C, IV	41.2
Santa Rosa JC, IV	39.8
Shasta C, IV	38.2
Sierra C, IV	37.0
Siskiyou Joint CC Dist, IV	35.1
Solano CC, IV	38.7
Southwestern C, IV	36.6
State Center CC Dist, IV	38.1
Taft C, IV	40.7
Ventura County CC Dist, IV	36.8
Victor Valley CC Dist, IV	34.1
West Hills CC Dist, IV	36.5
West Valley Joint CC Dist, IV	39.2
Woodbury U, IIA	30.0
Yosemite	
CC Dist, IV	37.3
Yuba C, IV	37.0

COLORADO

Arapahoe CC, IV	24.9
Colorado Northwestern CC, IV	29.5
CC of Aurora, IV	24.0
CC of Denver, IV	25.6
Northeastern JC, IV	25.5
Otero JC, IV	24.9
Pikes Peak CC, IV	24.7
Red Rocks CC, IV	33.7

CONNECTICUT

Hartford Sem, IIB	38.3

DELAWARE

Delaware Tech and CC	
Southern, IV	30.8
Stanton-Wilmington, IV	28.8
Terry, IV	28.1

FLORIDA

Broward CC, IV	28.8
Lake City CC, IV	23.4
Lake-Sumter CC, IV	25.8
Polk CC, IV	21.8
Valencia CC, IV	29.9

GEORGIA

Truett McConnell C, IV	19.7

HAWAII

U of Hawaii	
Honolulu CC, IV	29.6
Kapiolani CC, IV	30.9
Kauai CC, IV	28.6
Leeward CC, IV	30.9
Maui CC, IV	29.5
Windward CC, IV	28.7

IDAHO

North Idaho C, IV	27.0

ILLINOIS

Belleville Area C, IV	34.6
Carl Sandburg C, IV	20.4
Chicago C of Commerce, IV	18.5
C of Lake County, IV	35.0
Danville Area CC, IV	26.6
Elgin CC, IV	31.1
Governors St U, IIA	33.0
Harrington Inst of Interior Design, IV	27.3
Highland CC, IV	28.3
Illinois Eastern CC's, IV	23.3
John A Logan C, IV	29.4
Kankakee CC, IV	25.8
Kaskaskia C, IV	25.9
Lake Land CC, IV	26.3
Lincoln C, IV	20.6
McHenry County C, IV	30.0
Moraine Valley CC, IV	29.8
Morton C, IV	33.0
NAES C, IIB	19.1
National C of Ed, IIA	26.5
Parkland C, IV	33.4
Ray C of Design, IIB	22.8
Rock Valley C, IV	30.3
Springfield C in Illinois, IV	19.4
State CC, IV	24.6
Triton C, IV	35.0

IOWA

Des Moines Area CC, IV	24.9
Indian Hills CC, IV	22.1
Iowa Lakes CC, IV	22.5
North Iowa Area CC, IV	29.4
Western Iowa Tech CC, IV	22.8

KANSAS

Allen County CC, IV	25.5
Barton County CC, IV	24.4
Butler County CC, IV	24.2
Central C, IV	16.1
Coffeyville CC, IV	22.7
Colby CC, IV	23.1
Cowley County CC, IV	25.8
Hesston C, IV	17.6
Hutchinson CC, IV	27.4
Johnson County CC, IV	32.3
Kansas City Kansas CC, IV	28.7
Neosho County CC, IV	24.2
Seward County CC, IV	25.6

KENTUCKY

Midway C, IV	18.7
Saint Catharine C, IV	16.6

MARYLAND

Maryland Inst C of Art, IIB	27.3
Saint John's C, IIB	31.0

MICHIGAN

Detroit C of Business, IIB	26.3
Grand Rapids JC, IV	34.9
Mid Michigan CC, IV	26.4
Montcalm CC, IV	29.4
Schoolcraft C, IV	35.8
Suomi C, IV	25.7
West Shore CC, IV	28.4

MINNESOTA

Anoka-Ramsey CC, IV	31.5
Austin CC, IV	33.7
Bethany Lutheran C, IV	18.5
Brainerd CC, IV	30.3
Fergus Falls CC, IV	31.9
Hibbing CC, IV	26.7
Inver Hills CC, IV	31.3
Itasca CC, IV	30.6
Lakewood CC, IV	32.4
Mesabi CC, IV	31.1
Minneapolis CC, IV	31.6
Normandale CC, IV	31.4
North Hennepin CC, IV	32.0
Northland CC, IV	31.4
Rainy River CC, IV	27.1
Rochester CC, IV	31.0
Vermillion CC, IV	31.0
Willmar CC, IV	30.7
Worthington CC, IV	31.2

MISSISSIPPI

Coahoma JC, IV	17.8
Copiah-Lincoln JC, IV	19.4

MISSISSIPPI—Continued

East Central JC, IV	18.8
East Mississippi JC, IV	18.8
Hinds JC, IV	21.2
Holmes JC, IV	19.4
Itawamba JC, IV	21.1
Jones County JC, IV	24.2
Meridian JC, IV	21.9
Mississippi Delta JC, IV	21.7
Mississippi Gulf Coast JC, IV	22.7
Northeast Mississippi JC, IV	21.9
Northwest Mississippi JC, IV	21.9
Pearl River JC, IV	19.8
Southwest Mississippi JC, IV	20.6
Wood JC, IV	15.7

MISSOURI

Stephens C, IIB	22.0
Three Rivers CC, IV	20.2
Trenton JC, IV	20.7

MONTANA

Flathead Valley CC, IV	28.7
Miles CC, IV	25.3

NEBRASKA

Grace C of the Bible, IIB	17.7
McCook CC, IV	22.2
Metropolitan Tech CC, IV	22.8
Mid-Plains Tech CC Area, IV	24.9
Northeast Tech CC, IV	21.9
Southeast CC Area, IV	21.4
Western Tech CC Area, IV	23.1

NEVADA

Western Nevada CC, IV	31.4

NEW MEXICO

Northern New Mexico CC, IV	20.4
Saint John's C, IIB	30.1

NEW YORK

Friends World C, IIB	20.6
Sarah Lawrence C, IIA	34.5

NORTH CAROLINA

Bladen Tech C, IV	19.4
Blue Ridge Tech C, IV	23.3
Brunswick Tech C, IV	20.9
Carteret Tech C, IV	20.8
Fayetteville Tech Inst, IV	24.0
Halifax CC, IV	20.5
Haywood Tech C, IV	21.9
Isothermal CC, IV	21.9
Johnston Tech C, IV	19.7
Lees-McRae C, IV	19.6
Mayland Tech C, IV	20.6
McDowell Tech C, IV	20.0
Mitchell CC, IV	21.2
Montreat-Anderson C, IV	21.5
Nash Tech C, IV	23.2
Piedmont Tech C, IV	19.3
Richmond Tech C, IV	24.0
Southeastern CC, IV	19.9
Tri-County CC, IV	18.7
Vance-Granville CC, IV	22.7
Wayne CC, IV	23.0

NORTH DAKOTA

Bismarck JC, IV	29.4
Lake Region CC, IV	22.5
ND St Sch of Science, IV	27.8
ND St U Bottineau, IV	26.1
U of ND Williston Ctr, IV	26.8

OHIO

Art Acad of Cincinnati, IIB	18.2
Cincinnati Tech C, IV	26.6
Columbus Tech Inst, IV	25.1
Cuyahoga CC Dist, IV	36.8
Marion Tech C, IV	25.1

OKLAHOMA

Bartlesville Wesleyan C, IIB	18.4
Connors St C, IV	24.8
Eastern Oklahoma St C, IV	27.0

OKLAHOMA—Continued

Rose St C, IV	25.3
Saint Gregory's C, IV	21.4
Sayre JC, IV	24.3
Seminole JC, IV	24.8

OREGON

Clackamas CC, IV	28.4
Pacific Northwest C of Art, IIB	18.0

RHODE ISLAND

Roger Williams C, IIB	33.0

SOUTH CAROLINA

Aiken Tech C, IV	24.1
Anderson C, IV	23.2
Beaufort Tech C, IV	21.4
Chesterfield-Marlboro Tech C, IV	25.8
Clinton JC, IV	6.8
Denmark Tech C, IV	20.2
Florence-Darlington Tech C, IV	23.9
Greenville Tech C, IV	23.1
Horry-Georgetown Tech C, IV	22.5
Midlands Tech C, IV	24.4
Orangeburg Calhoun Tech C, IV	22.2
Piedmont Tech C, IV	22.0
Spartanburg Methodist C, IV	22.7
Spartanburg Tech C, IV	22.6
Sumter Area Tech C, IV	21.7
Tri-County Tech C, IV	22.6
Trident Tech C, IV	30.4
York Tech C, IV	23.0

TENNESSEE

Tomlinson C, IV	19.7

TEXAS

Austin CC, IV	26.0
El Paso County CC Dist, IV	25.9
Galveston C, IV	27.8
Hill JC, IV	23.4
Howard County JC Dist, IV	25.7
Midland C, IV	38.7
North Harris County C Dist, IV	31.2
Paris JC, IV	22.6
San Jacinto C, IV	29.8
Texas Southmost C, IV	27.1
Texas St Tech Inst	
Sweetwater, IV	26.3
Waco, IV	22.7
Trinity Valley CC, IV	26.9

UTAH

C of Eastern Utah, IV	25.7
Utah Tech C at Provo, IV	26.6

VIRGINIA

Southern Sem JC, IV	19.0
Virginia Intermont C, IIB	18.0

WASHINGTON

Centralia C, IV	27.2
Columbia Basin C, IV	28.3
Cornish Inst, IIB	16.0
Evergreen St C, IIB	32.7
Grays Harbor C, IV	28.3
Lower Columbia C, IV	25.5
Peninsula C, IV	29.8
Pierce C, IV	26.7
Seattle CC Dist, IV	28.6
Skagit Valley C, IV	26.3
South Puget Sound CC, IV	26.0
Tacoma CC, IV	32.0
Washington St CC Dist, IV	26.8
Wenatchee Valley C, IV	27.2

WISCONSIN

District One Tech Inst, IV	30.9
Mid-State Tech Inst, IV	29.6
Milwaukee Area Tech C, IV	35.6
Milwaukee Inst	
of Art & Design, IIB	20.9
Waukesha Co Tech Inst, IV	33.6

WYOMING

Casper C, IV	27.5

TRUST TERRITORY

CC of Micronesia, IV	11.8

4/28/87 C 2175-1

THE CHRONICLE
of Higher Education.

ISSN 0009-5982

April 29, 1987 • *$1.95*
Volume XXXIII, Number 33

News Summary

Articles on inside pages

The frantic race to produce new superconducting materials has taxed the system of scientific communications and raised questions about patents. Story on Page 6.

Animal-rights groups plan a campaign to prevent the patenting of new animal forms. Story on Page 11.

Microcomputers are more available at selective colleges than on other campuses, a survey shows. Story on Page 13.

Tensions between researchers and practitioners threaten to split the discipline of psychology. Story on Page 12.

Colleges have been urged to clarify the terms of tenure to avoid problems caused by the end of mandatory retirement. Story on Page 13.

The Department of Education isn't getting much applause from civil-rights groups for its efforts to hire more blacks and women. Story on Page 21.

Arizona's new Governor, who is a staunch conservative, has generated anger and dismay on the state's campuses. Story on Page 21.

Chapman College has moved from the brink of bankruptcy in 1975 to a position of financial stability. Story on Page 29.

The success of the women's athletics program at the University of Texas has made it a model for the rest of the country. Story on Page 35.

Venezuela's campuses face a new era of student activism and faculty discontent. Story on Page 40.

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Presidents' Panel Increasingly Divided on Sports Issues

Turning to big questions, NCAA group starts 'dialogue'

By DOUGLAS LEDERMAN

By forsaking specific proposals in favor of a longer-range, more philosophical examination of the status and structure of college sports, the presidents' commission of the National Collegiate Athletic Association is embarking on a course that will force it to confront a fundamental but divisive question:

Are big-time college sports necessary and beneficial for the institutions that sponsor them and for the athletes that take part?

The presidents last month offered an unexpectedly scant list of specific proposals for June's special convention, heralding instead a series of studies and a "national dialogue" to discuss pivotal issues facing college sports.

Together, those moves signify the first wide-scale consideration of major issues ever undertaken by the association, its leaders say. That is necessary, they believe, because of growing disagreement about the future path of college sports.

Unanimity Until Now

Until now there has been almost unanimous accord in the presidents' commission about what needed to be done to reform college athletics. The commission, formed in 1984, sought first to address the issues of integrity and the "proper balance" between athletics and academics.

The N.C.A.A. has used its legislative process to combat those problems in the past three years, instituting tougher academic standards and stricter punishment

Continued on Page 38, Column 1

LITTLE LETUP IN PROMISCUITY

AIDS Is Not Seen as a Major Threat by Many Heterosexuals on Campuses

By MICHAEL W. HIRSCHORN

LOS ANGELES

For Daniel A. Peña, a student at California State University at Los Angeles, AIDS is someone else's problem.

"I don't really pay any attention to it unless it's on the news," he says.

Mr. Peña, a heterosexual, says he is confident he would know if any future sexual partner was infected. "The people that I hang around with, I've grown up with," he says. "They'd tell me."

His response is typical of how many heterosexual students in the Los Angeles area are reacting to the AIDS epidemic.

At three campuses in and around this city, where AIDS is openly and widely discussed on radio, television, and in the classroom, many heterosexual students say they are not changing their sexual practices because of the disease.

"I've read articles about what's happening in San Francisco and what's happening in Greenwich Village in New York, and that gives you a taste of what some people are going through," says Jay W. Russell, a senior at the University of California at Irvine. "You don't see any reflection of the change of life style there occurring here."

Subtle Changes in Attitudes

Interviews with more than three dozen students at Irvine and the California State University campuses at Los Angeles and Long Beach indicate that students are generally aware of the dangers of the disease and that some are making subtle changes in their attitudes toward sex.

Students say a new mood on the campuses—a product of economic pressures, the war on drugs, a greater interest in financial well-being and security, and a now-budding fear of sexually transmitted disease—has led some of them to spurn the promiscuous, happy-go-lucky ways of past generations of college students.

'Now Maybe I'm the Cool One'

These students are rapidly becoming, in the words of one student (borrowing a line from First Lady Nancy Reagan), the "Just Say No" generation.

"I like the 'Just Say No' generation better because it has made it easier for me," says Martha Martinez, a student at Irvine. "It was very difficult for me in previous years because I was getting peer pressure because I was so traditional. You do get it when you're not into alcohol and you're not into drugs and you're not into sex.

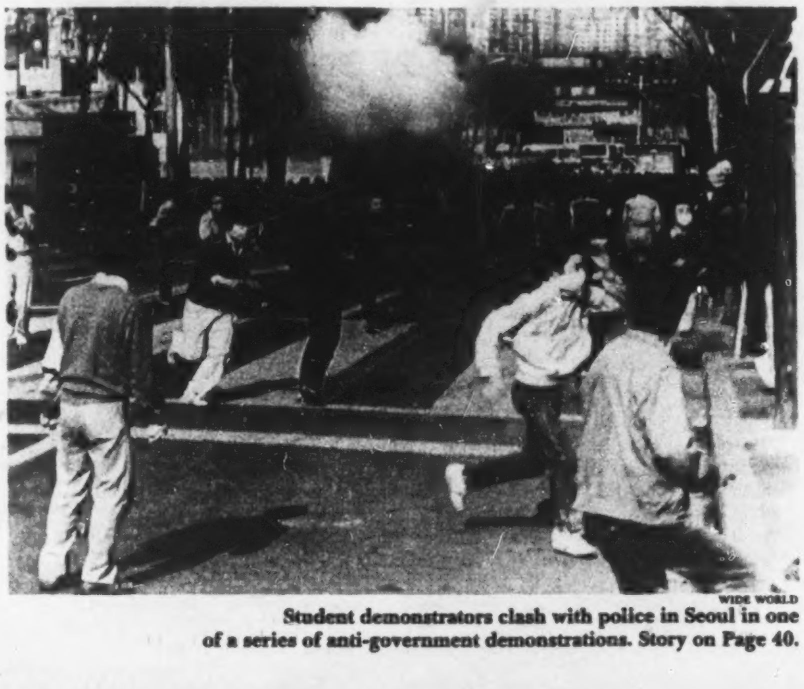
"I felt, I don't really fit in here," she adds. "So, I'm happy with the 'Just Say No' generation because now maybe I'm the cool one."

Other students, most of them in fraternities or sororities, say there has been little letup in promiscuity and that AIDS is rarely mentioned and then only as a joke.

AIDS educators here say they are encouraged by the progress made in educating students in the past two years, but they say they are frustrated by their

Continued on Page 32, Column 2

PROTESTS FLARE ON SOUTH KOREA'S CAMPUSES



WIDE WORLD

Student demonstrators clash with police in Seoul in one of a series of anti-government demonstrations. Story on Page 40.

Study by 15 Physicists Challenges Pentagon on 'Star Wars' Plans

By KIM McDONALD

WASHINGTON

A panel of prominent physicists last week challenged the Pentagon's contention that laser or particle-beam weapons for its "Star Wars" missile-defense program could be developed by the early 1990's. It concluded that "a decade or more of intensive research" would be required just to determine whether such weapons were technically feasible.

The 15-member panel of university, industry, and military physicists reached its conclusion after an 18-month probe into the technical feasibility of directed-energy weapons that form the centerpiece of the Reagan Administration's Star Wars research program, formally called the Strategic Defense Initiative.

The study, which was initiated and supported by the American Physical Society,

Continued on Page 6, Column 2

Note Book

Job-related stress strikes black faculty members especially hard, a new survey has found.

Like their white colleagues, black professors often suffer from excessively high self-expectations.

But the job pressures are different—and sometimes greater—for black professors, according to Earl Smith, who shared the results of his survey last week at the annual meeting of the American Educational Research Association.

Mr. Smith found that black faculty members felt burdened most by duties that stole time from research and teaching, such as committee work and serving as mentors or role models for students. Many said they did not feel rewarded for their extra efforts.

White faculty members generally find the demands of research and scholarly work to be the main sources of stress.

Mr. Smith, an assistant professor of comparative American cultures at Washington State University, surveyed some 2,095 faculty members at 195 colleges and universities. About half replied.

In further surveys, he expects to look at job tensions for white faculty members at black institutions.

Young black professors think they have been hired because they are good scholars, Mr. Smith noted. But then other demands crop up, and they get "boxed in."

"We don't ask that of young white faculty members," the professor added.

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Scholarly disciplines are growing more interdisciplinary, faculty members at the University of Illinois found at a campus retreat.

"In a changing world, disciplines and the process of doing research are changing," said Thomas E. Everhart, chancellor of the Urbana-Champaign campus. Scholars who do interdisciplinary work are "pioneers," he said. "They lead people across uncharted mountains and establish settlements."

The retreat was organized to discuss "How Academics Interact." Many speakers said that interaction with others was crucial to their disciplines, from law to particle physics, where more than 100 people can collaborate on a single paper.

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Philosophers, said Richard Schacht, "cannot deal adequately with most philosophical issues without paying attention to what is going on in other areas," including cognitive science, psychology, and artificial intelligence.

Virtually all of his departmental colleagues have either an appointment or an "informal link" to other departments—and Mr. Schacht said that is how it should be.

"For Socrates, the practice of philosophy was interaction," Mr. Schacht said at the retreat. "He didn't go in his office, close the door, and work on his PC. He went down to the marketplace and talked to people."

Personal & Professional

Academic Psychologists Are Dropping Out of Association in Discord with Practitioners

A fourth of group's scientists consider resigning; field could be 'irrevocably changed,' some fear

By KATHERINE S. MANGAN

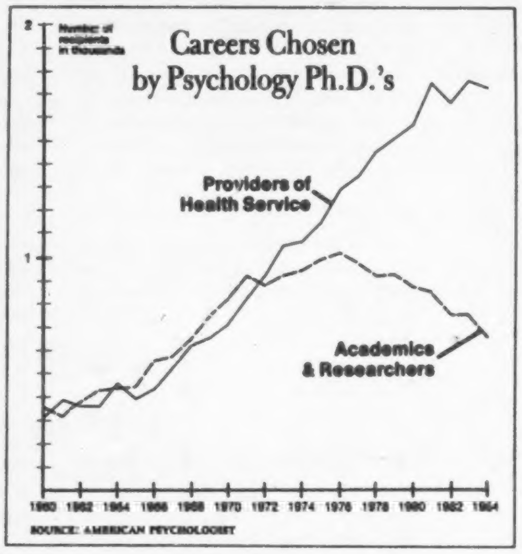
WASHINGTON

The field of psychology could be "irrevocably changed" if academic and research-oriented psychologists continue to drop out of the professional organization that many feel no longer serves their interests.

That is the consensus of those who are pushing for a major reorganization of the American Psychological Association, which in recent years has become increasingly dominated by practitioners—persons who deal directly with patients.

Critics of the association's present structure argue that unless something is done to retain researchers, psychology will become even more polarized and less able to address issues of national concern.

"I'm very concerned that the character of the discipline may be irrevocably changed if we lose our scientific base," says Gary D. Gottfredson, a psychology professor at the Johns Hopkins University who serves on the association's Committee on Employment and Human Resources.



SOURCE: AMERICAN PSYCHOLOGIST

'We Must Keep in Touch'

To treat people with psychological problems, practitioners need to stay abreast of the latest research, but if scientists continue to drop out, that communication may be lost, the proponents of reorganization argue.

"We must keep in touch with each other so that the practitioner is continually informed about the basic scientific findings," says the A.P.A.'s president, Bonnie R. Strickland, a professor at the University of Massachusetts at Amherst.

Later this year, members are expected to vote on a restructuring plan that would balance the needs of scientists, who are primarily involved in research, and practitioners, who work directly with patients.

As the number of practitioners in the association has grown, many academic and research-oriented psychologists have felt that their own interests were being neglected.

The A.P.A. does not keep figures on the breakdown of its 63,000 members, but in a survey completed in February, 14 per cent of the respondents classified themselves as researchers or teachers; 45 per cent as practitioners; and 36 per cent as scientists-practitioners. Three per cent called themselves public-interest psychologists.

The survey also found that more than one-fourth of the association's scientists were seriously considering resigning from the organization, and nearly half indicated it was becoming harder to justify their memberships.

"The real frustration on the part of scientists is that the busy-work, the energies, the money, and governance time at A.P.A. are taken up on practitioner interests that they're not really interested in," says David A. Rodgers, a member of a panel that studied ways to restructure the organization.

Many practitioners, for instance, are interested in such issues as liability, licensing, and third-party reimbursement, which researchers without practices usually do not care about.

The dominance of practitioners in the association is hardly surprising, given the changes that have been taking place in psychology.

In a December report entitled "The Changing Face of American Psychology," the association pointed out that between 1972 and 1984 the number of psychology Ph.D.'s working in health-service fields had jumped from 919 to 1,715—or 46 per cent.

By contrast, the number of Ph.D.'s in academic and research fields dropped 29 per cent, from about 890 to 630. The report was published in *American Psychologist* magazine.

A 'Glorified Trade Union'

Norman M. Bradburn, provost of the University of Chicago, says he dropped out of the A.P.A. about 10 years ago while serving as chairman of the university's psychology department. The association, he says, was becoming little more than a "glorified trade union."

"One day, the *Monitor* [the A.P.A. news-

Continued on Page 14, Column 3

Professors in 'Hard-to-Hire' Disciplines Continue to Lead in Salaries

By SCOTT HELLER

WASHINGTON

A new assistant professor in accounting, business, or computer science is likely to be hired at a bigger salary than a colleague who has taught for a while, the College and University Personnel Association reports in two new studies of faculty salaries by discipline and rank.

Generally, professors in "hard-to-hire" disciplines continue to earn more than those in other fields, with salaries becoming compressed in the junior ranks.

"The rich are getting richer and the poor are getting poorer," said Richard D. Howe, a professor of higher education at Appalachian State University who helped direct the studies.

Engineering Professors Lead

A newly hired accounting specialist, for example, earns $31,072 at private institutions, while the average assistant professor makes $29,408. Associate professors earn $37,134, the studies found.

In less competitive fields, the salary picture for new assistant professors is far more bleak. In sociology, for example, a faculty member starting out at a private institution can expect to earn about $22,228.

Professors in engineering top both salary lists. At public institutions, engineering faculty members earn an average of $38,273, 16 per cent more than the average for all fields at those institutions. At private institutions, the average salary is $42,934, 35 per cent more than all fields combined.

Other big earners at public institutions are professors of physics, and business and management.

At private institutions, professors of geological sciences and physics earn comparatively high salaries.

Historians do well, also, earning $35,205 at public institutions and $32,671 at private colleges and universities.

At the low end of the scale—earning less than the average—are faculty members in the performing arts, special education, and secretarial programs.

Nursing professors are among those who make the least, averaging $27,862 at public institutions and $24,894 at private institutions.

The studies found that full professors at private institutions earn slightly more than those at public institutions, but at other ranks, those who work at public colleges and universities take home larger paychecks.

Fringe Benefits Excluded

Figures for public institutions were based on reports covering 63,490 faculty members at 261 institutions that are members of the American Association of State Colleges and Universities.

The private-college figures cover 46,597 faculty members at 478 private institutions.

The figures, which were reported by campus administrators, represent nine- or

Continued on Page 14, Column 3

AS MANDATORY RETIREMENT ENDS

Colleges Urged to Consider Tenure Contracts with 'Agreed Expiration Dates'

WASHINGTON

College and university administrators must make the terms of tenure clear to faculty members to avoid problems caused by the elimination of mandatory retirement, the chairman of the Commission on College Retirement said last week.

The commission chairman, Oscar M. Ruebhausen, said higher-education institutions should consider setting specific terms for tenure—30 years, for example—if they don't already have a clear policy that tenure will end at age 65 or 70.

Otherwise, he said, they may have trouble dismissing those faculty members who want to stay on indefinitely.

Under legislation passed last year by Congress, it will eventually be illegal to force professors to retire at a set age.

But there is nothing wrong with asking them to agree to limited terms for tenure, said Mr. Ruebhausen, who is also a retired lawyer.

'Retirements with Consent'

Colleges that offer tenure contracts with "an agreed expiration date" will not be violating the age-discrimination legislation if professors step down when that date arrives, he said.

"What you will have in that situation is a consensual retirement, and retirements with consent, in my view, are not age discrimination prohibited by law," he added.

Mr. Ruebhausen made his remarks at a meeting on faculty retirement sponsored by the Consortium on Financing Higher Education.

Colleges have seven years to consider their retirement options before the law uncapping the mandatory retirement age begins to affect professors. Federal law allows a seven-year grace period for implementation of the provisions concerning tenured professors.

During that time, administrators should make sure their tenure arrangements are clear, and that faculty members know whether tenure will end at an expected retirement date, Mr. Ruebhausen said. Such contracts would be binding whether the arrangements were spelled out in a handbook or simply understood by all parties, he said.

Some Skepticism Expressed

Mr. Ruebhausen conceded that colleges could run into problems if they begin setting up contracts to expire at age 65 or 70. But they could get around that, he suggested, by having contracts run for a certain number of years, based on a person's age.

For instance, a contract for a 35-year-old might run for 30 or 35 years, while one for a 50-year-old might last only 15 or 20 years. As long as faculty members agreed to such arrangements, they should be legal, Mr. Ruebhausen said.

Some administrators were skeptical.

"It seems to me that if you're going to tell a 35-year-old that his tenure will last 35 years, and that just happens to coincide with the normal retirement age, that would be a blatant way of circumventing the law," said B. E. Donbaugh, personnel director at the University of Rochester.

Mary W. Gray, a mathematics professor at American University who is also a lawyer, objected to the idea of faculty members' negotiating individual tenure contracts.

"Faculty members are not always in a good bargaining position," said Ms. Gray, who is also a member of the Commission on College Retirement. "They often bargain away their rights without realizing it."

Several administrators agreed, however, that it was important to consider what tenure would mean when there is no set age for retirement.

"It's true we haven't given a lot of thought to how long tenure lasts," said Ralph W. Nicholas, deputy provost of the University of Chicago. "We always thought it lasted until retirement. Now that there's no definite time of retirement, it does become very fuzzy."

An Awkward Position

Without a fixed retirement age, college administrators may find themselves in an awkward position when professors who are no longer effective want to stay on the job, said Katharine Hanson, executive director of the consortium.

"No one likes the idea of having to boot people out and confront them with their own declining abilities," she said.

Colleges are also concerned that "if faculty stay on much longer than they do now, it may affect their capacity to hire younger faculty," she said.

One of the big unknowns is how many professors will opt to continue working beyond age 65 or 70.

AAUP's Reaction

The American Association of University Professors recently concluded that the new law should have no significant effect on the age people choose to retire. If that is the case, none of the dire consequences others are predicting are likely to happen.

But Neil R. Grabois, provost of Williams College, predicted that colleges would have some new headaches if the average age of retirement jumped.

"Affirmative action will be slower, salaries will be higher on the average, and health-care costs will grow considerably," he said.

If fewer tenure slots are opening up, young people might think twice before considering an academic career, he added. To avoid such problems, he said, administrators will have to use gentle persuasion to encourage some older professors to step down.

Besides sweetening the incentives for early or "normal" retirement, administrators should find ways to allow retiring faculty members to retain a link to their institutions, Mr. Grabois said.

Allowing a faculty member access to office space, the library, and athletic facilities could help ease the transition into retirement, he added.

—KATHERINE S. MANGAN

Microcomputers Found More Available–and More Often Required–at Selective Colleges

By JUDITH AXLER TURNER

Microcomputers are more available—and more often required—at the nation's most selective colleges and universities than on other campuses, a survey has found.

The survey, which covered 211 institutions, found that the most selective were most likely to require or recommend that students own microcomputers, to specify the brand of microcomputer that students buy, to offer discounts on microcomputer purchases, and to have a low ratio of students, faculty members, and staff members to each microcomputer. The survey was conducted by EDUCOM and Peat Marwick Main and Co., in conjunction with *The Chronicle*.

The survey included questions about microcomputer ownership, access to microcomputers, software availability, assistance in using software, illegal access, and illegal copying.

The 12-page questionnaire was sent to the nearly 450 colleges and universities that are members of EDUCOM, a computer-technology consortium.

The survey results will be published next month.

'In Forefront of Concern'

"This sample, though not intended to be representative of all institutions of higher education, probably closely represents those institutions in the forefront of concern about computing and resources for computers," a survey report said.

Steven W. Gilbert, managing director of EDUCOM, who worked on the project, said the information would be "invaluable to our member institutions."

"It will help them understand more realistically what their peers are actually doing so they can make decisions for their own computer projects," he said.

Susan S. Lukesh, senior consultant at Peat Marwick, did the analysis and wrote the report.

13 Pct. of Students Are Owners

One figure that surprised some administrators was the respondents' estimates of student-owned computers. On average, 13 per cent of the students in the 211 institutions were said to own microcomputers.

"I was amazed at how many microcomputers are already out there at every level," said Peter Lyman, assistant director of academic computing at Michigan State University.

Mr. Lyman is working with EDUCOM to find ways to get more information from the survey results and to plan future surveys that will give longitudinal data, he said.

For instance, he would like to compare figures from institutions where computers are required with those from institutions where students are not encouraged to purchase them. "My intent is to make the survey, and future surveys, useful as policy tools, to allow people to get a sense of norms and variations," Mr. Lyman said.

EDUCOM's Mr. Gilbert said that, because the questionnaire was sent out last August, it probably reflected the situation in academic 1985-86. Although both the totals and the percentage distributions may have changed, he said, the survey represents the "first comprehensive study of microcomputer ownership and use."

The data in the survey showed the most interesting results when broken down according to Barron's Index of Competitiveness, said Peat Marwick's Ms. Lukesh. For instance, she noted, the most selective institutions had the highest estimated percentage of student ownership of microcomputers, and students in professional and graduate schools were more likely than undergraduates to own computers. The breakdown follows:

Student ownership of computers, by type of institution

Most selective	24%
Highly selective	12%
Very selective	16%
Competitive	10%
Less selective	9%
Non-selective	10%
Professional and graduate schools	34%
Private colleges	14%
Universities	14%
Public colleges	11%
Four-year colleges	11%
Two-year colleges	7%
All institutions	13%

Respondents were also asked to estimate the numbers of microcomputers purchased by their colleges and universities, both centrally and through departments, and to estimate the percentage breakdown by brand.

Almost half of the 109,847 microcomputers estimated to have been purchased by institutions were made by International Business Machines Corporation. Except for the Apple II and the Apple Macintosh, all seven of the most popular microcomputers were from I.B.M. or were compatible with I.B.M.:

Institutional purchases, by brand

I.B.M. PC	28,143
Apple Macintosh	19,233
I.B.M. PC/XT	13,771
Zenith	9,894
Apple II	9,463
I.B.M. PC/AT or RT-PC	7,257
Other I.B.M. compatible	5,519

At 117 of the 211 institutions in the survey, students who were contemplating microcomputer purchases were encouraged to buy one of a limited number of brands—usually because they were sold and serviced on the campuses and offered at a discount, or because they were brands for which instructional software was available. Following are the computer brands, and the number of institutions that considered them acceptable:

Institutions accepting major brands

I.B.M.	96
Zenith	61
Apple Macintosh	56
Apple II	31
A.T.&T.	31
DEC	16
Tandy	15
Hewlett-Packard	9
Commodore	4
I.T.T.	4
All computers	3
Texas Instruments	3
Atari	1
Other	30

All 44 of the public institutions said they recommended I.B.M. computers.

Many institutions purchase microcomputers for use by faculty members and stu-

Continued on Page 17, Column 1

FACT-FILE

Median Salaries of Administrators in 'Secondary' Positions, 1986-87

The following table is a companion to the Fact-File of primary administrators' salaries that appeared in the April 22 issue of *The Chronicle*.

The report of the salary survey was written by Richard C. Creal and Jan P. Miller of the College and University Personnel Association, along with John M. Toller, personnel director at the University of Connecticut.

The figures, based on reports from 1,637 colleges and universities, are intended to give only a broad overview of administrative salaries. Comparative analyses between positions or among institutions are available in the full report, or through special studies purchased from the personnel association.

Copies of the report, *1986-87 Administrative Compensation Survey*, are available from the order desk, CUPA, 11 Dupont Circle, Suite 120, Washington 20036; (202) 462-1038.

The price is $50 per copy for members, $125 for non-members who participated in the survey, and $200 for others.

	All universities	All 4-year colleges	Public 2-year colleges	All institutions
Assistant to president:				
Institution	$44,500	$31,800	$32,100	$36,700
System	57,900	—	39,068	46,073
Director:				
Annual giving	32,750	26,730	—	28,938
Conferences	31,800	23,000	—	28,801
Corporate and foundation relations	38,435	30,282	—	34,007
Estate planning	42,000	31,619	—	39,000
Governmental and legislative relations	51,700	—	—	49,995
Health and safety	35,192	—	—	33,924
Medical-center				
Public relations	41,855	—	—	44,040
Personnel	40,500	—	—	40,500
Sports information	25,402	18,825	—	23,145
Telecommunications	37,300	23,784	31,150	34,176
Manager:				
Benefits	28,000	23,200	22,457	26,795
Building maintenance trades	30,680	26,041	26,784	28,466
Custodial services	27,540	21,000	22,980	24,492
Employee relations	33,000	—	—	32,682
Employment	29,001	23,650	26,000	28,000
Landscape and grounds	27,935	22,480	24,337	25,335
Payroll	27,800	19,740	23,462	24,710
Personnel information	31,039	—	—	29,550
Power plant	32,859	29,486	—	31,687
Technical trades	32,700	26,700	26,281	30,500
Training and development	30,420	—	—	30,420
Wage and salary	31,200	—	25,028	30,000
Associate director:				
Admissions	31,251	23,550	24,003	27,400
Affirmative action and equal employment	31,263	—	—	30,935
Bookstore	25,152	15,300	20,538	21,736
Budget	38,500	31,860	28,169	36,750
Computer center	43,000	27,527	37,764	37,100
Academic	41,300	28,800	—	35,300
Administrative	44,000	27,700	—	38,220
Food services	32,221	22,486	—	28,345
Institutional research	35,000	—	34,710	32,616
Personnel	33,991	27,000	31,237	32,500
Physical plant and facilities management	38,004	26,677	31,657	33,882
Publications	26,031	18,500	—	23,000
Purchasing	30,702	22,200	24,980	28,300
Student counseling	33,617	20,667	—	28,580
Student financial aid	28,178	19,939	25,625	24,200
Student housing	30,924	18,500	—	25,692
Student union	28,425	21,000	—	26,155
Associate:				
Bursar	27,600	16,821	—	26,600
General counsel	46,481	—	—	45,000
Registrar	31,851	21,300	26,805	27,500
Assistant director, admissions	23,742	19,000	24,434	21,300
Assistant registrar	24,521	18,800	22,943	22,000
Librarian:				
Acquisitions	29,238	23,300	28,221	26,832
Circulation	25,053	20,441	28,556	23,130
Public services	34,053	24,357	26,203	29,018
Reference	28,518	22,475	27,063	25,517
Technical services	32,868	23,485	27,915	27,252
Coordinator, resource development	26,222	22,600	—	25,080
Data base administrator	37,592	28,000	35,315	35,316
Student union, business manager	27,196	—	—	26,829
Programmer:				
Analyst I*	27,768	24,500	27,477	27,137
Analyst II**	22,050	19,775	22,660	22,000
Systems:				
Analyst I*	33,340	28,800	31,131	32,096
Analyst II**	28,044	22,680	26,616	26,921
Housing officer:				
Administrative operations	27,500	—	—	25,643
Family housing	27,500	—	—	27,500
Residence life	25,122	17,183	—	22,980

— No data or insufficient number of responses.
* Highest level
** Lowest level

SOURCE: COLLEGE AND UNIVERSITY PERSONNEL ASSOCIATION

'Hard-to-Hire' Disciplines Draw Top Salaries

Continued from Page 12

ten-month salaries for full-time faculty members and exclude fringe benefits and summer earnings. Appalachian State University provided financial and technical support for the two studies.

The studies found that faculty members enjoyed moderate salary increases, confirming the trend reported by the American Association of University Professors (*The Chronicle*, April 8).

"I think the increases are slowing down a bit," said Meredith Ludwig, senior research coordinator for the state colleges' association.

"Our institutions are saying that faculty salaries are third on their list of increased costs this year, behind insurance and computer acquisition," she added.

Ms. Ludwig pointed out that education professors are doing relatively well, according to the surveys. At private institutions, they earn, on average, $29,786, and at public institutions, $33,615.

'A Political Game'

The studies indicate that most senior faculty members who bargain collectively at public institutions earn higher salaries than their colleagues on campuses that are not unionized.

However, Mr. Howe pointed out, assistant professors and new assistant professors tend to earn less than their counterparts at non-unionized campuses. "The people on the bargaining committees seem to be getting raises for themselves," he said. "There's kind of a political game going on."

Copies of the 1986-87 salary reports are available from the order desk, College and University Personnel Association, 11 Dupont Circle, Suite 120, Washington 20036. The price of each is $20 for association members, and $40 for others, postage prepaid.

Each report includes a list of institutions that participated in the survey. Colleges that wish to compare their average faculty salaries with those of a group of at least 10 similar institutions may purchase a special study from the association.

Psychologists Are Dropping Out of Association

Continued from Page 12

paper] arrived the same day as the dues bill," he recalls. "I read through the paper and I said there isn't one thing that's of interest to me, and why should I pay for this." Annual dues at the time were more than $100, he says.

Debates over Curriculum

The scientists and practitioners have clashed at meetings of the A.P.A.'s Council of Representatives over proposed curriculum requirements for colleges and universities. Some practitioners have suggested that certain courses be required to meet the licensing needs of future counselors and clinicians. After bitter debates, academics have successfully staved off such proposals, arguing that they amount to an unwarranted intrusion on academic freedom.

The association's governing board appointed a committee in 1984 to come up with a reorganization scheme that would balance the interests of the diverse groups.

After the original committee was unable to develop a plan acceptable to the A.P.A. Council of Representatives, a second panel was appointed to bring a compromise plan to the council's meeting this August.

2 Assemblies Proposed

One proposal that the committees considered would divide members into two semi-autonomous assemblies, one for scientific and academic psychologists—into which most college professors would fall—and another for health-service practitioners. The latter group includes clinicians, counselors, and school psychologists.

Other proposals would create one or two more assemblies to accommodate those whose interests lie somewhere in between, like those who teach and also counsel patients.

According to the association's poll, many members believe separate assemblies within the A.P.A. is the best solution.

"This would allow them to pursue their separate interests within an umbrella organization that brings them together when they have common interests," says Jack Bardon, chairman of the first committee to explore new structures for the organization.

Not All Are Bailing Out

Not all academic psychologists are bailing out of the association. Donald A. Riley, chairman of the psychology department at the University of California at Berkeley, says he's staying in the A.P.A., for now.

"I still feel it's the best scientific advocate we have in Washington," he says. "Until it's clear the A.P.A. is not going to continue to serve the interests of the academic community, I'll stay in."

Many psychologists responding to the A.P.A. poll predicted that academics and researchers would eventually form their own independent organization.

> "Until it's clear the A.P.A. is not going to continue to serve the academic community, I'll stay in."

That, Mr. Bardon says, "would be tragic for everyone" because it would erode the organization's scientific base.

"Our scientific base is what distinguishes us from psychiatrists and other social-service workers," he says.

"It's written into our bylaws, and it's the way most psychologists think of themselves."

One potential consequence of such a split, many members fear, is that researchers and practitioners would no longer communicate with one another. Some members are also afraid that by splintering into separate groups, psychologists would lose legislative support.

Survey of 1,600 Members

The A.P.A. report, which was based on a survey of 1,600 members, also found that:

- ► Most respondents felt the association's policies favored health practitioners over other groups, and that reorganization was necessary to address that fact.
- ► Most favored a two-assembly approach.
- ► Many saw risks in such an approach, saying it could impede communication and polarize science and practice.
- ► Not reorganizing would also have a price, according to some respondents. About half said the association would have trouble attracting new researchers if it remained unchanged.

Boston U.'s Faculty Union Asks NLRB to Review Denial of Bargaining Rights

BOSTON

The National Labor Relations Board "grossly exaggerated" the managerial authority of professors at Boston University, a faculty union has argued in court.

The union asked the U.S. Court of Appeals for the First Circuit to review the labor board's decision denying faculty members the right to bargain collectively.

In legal papers filed this month, the union, an affiliate of the American Association of University Professors, argued that faculty participation in curricular matters did not make them managerial employees.

The union cited a 1984 case, *Loretto Heights College* v. N.L.R.B., in which a 10th Circuit court ruled that professors were not managers, even though they helped shape academic affairs.

At Boston University, as at Loretto Heights, faculty members lack "effective recommendation or control," and even curricular decisions are "subject . . . to many layers of review and approval," the union contended in its court petition.

The A.A.U.P. has represented about 880 full-time faculty members at various times over the last decade. The university refused to bargain after the U.S. Supreme Court's 1980 *Yeshiva* decision, which held that faculty members with management rights could not unionize at private universities.

The N.L.R.B. upheld the university's refusal last October.

Jacqueline Wei Mintz, the A.A.U.P.'s associate counsel, said the organization's national office will file a friend-of-the-court brief in the case.

She said the case was important because Boston University is the largest campus where a decision has been issued on the managerial authority of faculty members. "The conclusion that all faculty members are supervisors, which is an unprecedented finding, is wrong," she added.

A university spokesman said last week that the N.L.R.B. decision was "correct" and would be upheld. —SCOTT HELLER

FACT-FILE

Average Faculty Salaries by Rank in Selected Fields, 1986-87

	261 Public Institutions						478 Private Institutions					
	Professor	Associate professor	Assistant professor*	New assistant professor	Instructor	All ranks	Professor	Associate professor	Assistant professor*	New assistant professor	Instructor	All ranks
Accounting	$46,023	$38,378	$32,969	$34,295	$23,606	$36,223	$44,913	$37,134	$29,408	$31,072	$22,234	$33,879
Agribusiness and agricultural production	36,738	30,178	26,964	—	20,781	31,144	—	—	—	—	—	—
Anthropology	41,471	32,592	26,071	—	—	35,217	43,406	32,274	25,477	24,022	—	33,981
Architecture and environmental design	38,676	33,004	26,800	—	—	32,488	43,619	33,969	27,732	25,668	21,434	35,982
Area and ethnic studies	43,717	35,781	28,776	—	—	34,559	46,746	36,393	27,973	—	—	37,199
Audiology and speech pathology	42,055	33,182	26,473	22,980	21,916	32,867	43,070	31,749	24,507	—	22,322	30,162
Business administration and management	43,937	36,570	31,560	32,524	22,250	35,245	45,659	35,563	28,797	28,907	23,820	33,825
Business and management	45,372	37,724	31,460	32,280	23,831	35,846	49,523	37,412	31,278	32,912	22,855	37,253
Business economics	42,549	34,503	29,601	28,807	23,748	34,875	44,215	33,543	28,143	28,547	21,177	33,478
Chemistry	40,367	32,346	25,931	24,615	20,278	35,029	41,821	30,402	24,897	23,828	18,003	34,609
Communications	39,845	31,608	25,818	25,322	20,838	29,917	37,444	31,195	24,723	24,971	20,078	28,726
Communications technologies	39,247	32,244	25,824	—	22,885	31,876	35,439	31,309	25,367	25,377	21,465	27,587
Computer and information science	44,885	37,104	31,615	32,326	23,425	34,384	44,627	34,602	28,518	28,467	22,017	32,154
Curriculum and instruction	39,263	32,480	26,878	23,843	21,655	33,046	43,976	35,162	25,298	—	—	34,336
Dramatic arts	41,077	31,646	24,649	22,459	20,680	31,078	38,166	29,409	24,004	21,997	19,914	28,517
Education	40,183	32,821	26,480	25,286	21,405	33,615	37,142	29,829	24,073	22,817	20,503	29,786
Education administration	40,297	32,948	27,066	25,915	—	36,301	41,350	28,728	25,361	—	—	31,468
Engineering	45,866	37,548	32,467	32,155	23,829	38,273	51,835	38,637	32,963	33,399	25,614	42,934
Fine arts	38,516	30,995	25,244	23,489	21,358	31,910	37,054	28,737	23,491	22,602	20,144	29,124
Foreign languages	40,284	31,743	25,280	23,028	21,037	31,754	38,353	29,563	23,901	22,794	18,623	29,128
Geography	40,499	31,419	26,183	25,055	21,166	33,778	40,234	32,277	24,881	—	—	33,446
Geological sciences	41,155	32,972	27,219	—	20,965	35,231	45,631	33,520	27,272	26,520	—	37,776
History	39,728	32,047	25,517	22,876	21,096	35,205	39,330	30,284	23,798	21,881	18,500	32,671
Home economics	39,224	32,386	26,283	24,701	21,012	29,414	34,885	26,617	23,057	24,571	18,105	24,744
Letters	39,224	31,369	25,151	22,805	19,358	31,055	37,888	29,243	23,166	22,081	17,830	29,653
Library and archival sciences	39,410	31,458	25,448	23,389	20,441	28,030	36,936	27,876	23,503	—	19,165	26,026
Life sciences	39,704	31,860	26,233	25,045	19,932	34,104	39,701	30,312	24,653	24,817	17,515	32,240
Mathematics	41,298	32,986	27,322	26,513	20,070	32,486	42,705	31,341	25,263	25,014	19,732	31,894
Multi-interdisciplinary studies	39,134	32,561	25,716	23,848	21,777	30,971	35,721	26,575	21,843	21,292	18,003	26,154
Music	38,831	30,892	25,172	23,418	21,152	31,047	35,768	27,736	22,889	22,996	19,858	28,136
Nursing	41,421	32,264	26,587	27,174	22,061	27,862	37,489	29,328	23,428	24,462	20,081	24,894
Philosophy and religion	40,228	31,829	25,315	22,786	19,840	33,877	36,741	29,273	23,575	22,002	19,190	30,687
Physical education	39,367	32,374	27,030	24,369	22,546	30,421	35,835	29,525	24,100	21,676	20,084	26,533
Physical science	40,272	32,196	26,376	24,623	20,584	33,567	40,474	29,361	25,977	—	17,220	32,485
Physics	41,556	33,481	27,202	25,677	21,724	36,061	46,523	33,415	26,781	25,344	19,388	38,701
Political science	40,749	32,185	25,473	23,098	21,491	33,906	42,246	31,368	24,327	23,206	19,663	33,119
Psychology	40,841	32,771	25,997	24,150	20,719	34,479	39,836	29,839	24,064	23,474	18,872	31,444
Reading education	37,336	30,098	26,055	—	21,282	31,422	43,955	31,097	21,625	—	—	28,772
Secretarial and related programs	37,574	31,927	25,342	—	20,409	29,020	—	24,241	19,427	—	15,699	20,464
Social sciences	39,245	30,864	25,796	25,445	21,252	31,544	42,076	31,332	24,919	25,344	20,555	32,528
Sociology	40,245	32,462	25,934	22,984	21,076	33,092	36,563	28,966	24,111	22,226	19,054	29,914
Special education	38,684	31,335	25,707	24,391	20,438	31,354	39,305	28,640	22,551	22,033	16,753	27,770
Student counseling and personnel services	40,283	33,075	25,875	24,006	23,305	34,520	39,675	30,688	23,743	—	—	32,448
Teacher education, general programs	38,562	31,498	26,043	24,355	20,479	32,483	33,499	27,865	22,518	21,464	17,434	26,875
Theology	—	—	—	—	—	—	35,320	29,252	24,051	24,336	20,243	30,132
Visual and performing arts	37,919	30,260	24,705	23,130	20,966	30,271	38,126	30,601	24,339	22,571	20,451	30,056
Vocational and technical education	39,420	31,647	27,030	28,248	21,407	30,877	—	—	—	—	—	—
All major fields	**$40,606**	**$32,880**	**$27,168**	**$26,220**	**$21,523**	**$32,980**	**$41,175**	**$31,301**	**$25,440**	**$25,276**	**$20,049**	**$31,849**

Note: Data are based on reports from 261 public institutions that are members of the American Association of State Colleges and Universities and from 478 private colleges and universities.
* Includes data for new assistant professors.
— Indicates fewer than 10 positions in a rank or fewer than 50 of all ranks. The data are included in the averages for all ranks and for all fields.

SOURCE: COLLEGE AND UNIVERSITY PERSONNEL ASSOCIATION

From the North Pole to the Equator, Illinois Professors Trudge Along

NORMAL, ILL.

Professors at Illinois State University walked from the North Pole to the Equator in a single semester.

Or rather, that is the distance 284 of them covered in trudging from their offices to far-flung classroom buildings.

That information comes courtesy of *Have Chalk, Will Travel*, a study by Michael D. Sublett, an associate professor of geography.

The "instructional shuffle," a report of the study says, has been a way of life at the university, where a shortage of classroom space has forced faculty members and teaching assistants to walk across the campus several times a week for class meetings.

6,184.79 Miles

No one really knew how far faculty members trekked until Mr. Sublett assigned the problem to his geography class.

They figured out that professors walked 6,184.79 miles in the fall semester of 1985—the distance from the North Pole to the Equator, and the same as a hike from New York to Los Angeles and back, with 750 miles left over.

Topping the list of Illinois itinerants was the English department: 27 faculty members walked 1,169 miles. Two instructors walked more than 100 miles each.

After English came the department of health, physical education, recreation, and dance, with 857 miles of commuter travel.

'The Pied Piper'

The statistics confirmed what some faculty members already suspected.

"After teaching a class, I feel like the Pied Piper going across campus with my students behind me," says Regina Foehr, a teaching assistant in English who logged 83 miles.

Mr. Sublett, whose classes are rarely more than 100 feet from his office, expected a much smaller total. "I find it a waste of time that our faculty members have to walk 6,000 miles, semester after semester," he says. "It boggles my mind."

While a few faculty members say they like getting out of their offices, many feel they are given little choice in the matter and "suffer in silence," he says.

Although he sees humor in the situation, Mr. Sublett says genuine problems are caused by so much faculty traffic. Professors often avoid carrying handouts when there's a long walk. And students may be reluctant to go to a professor's office if it's far from the classroom.

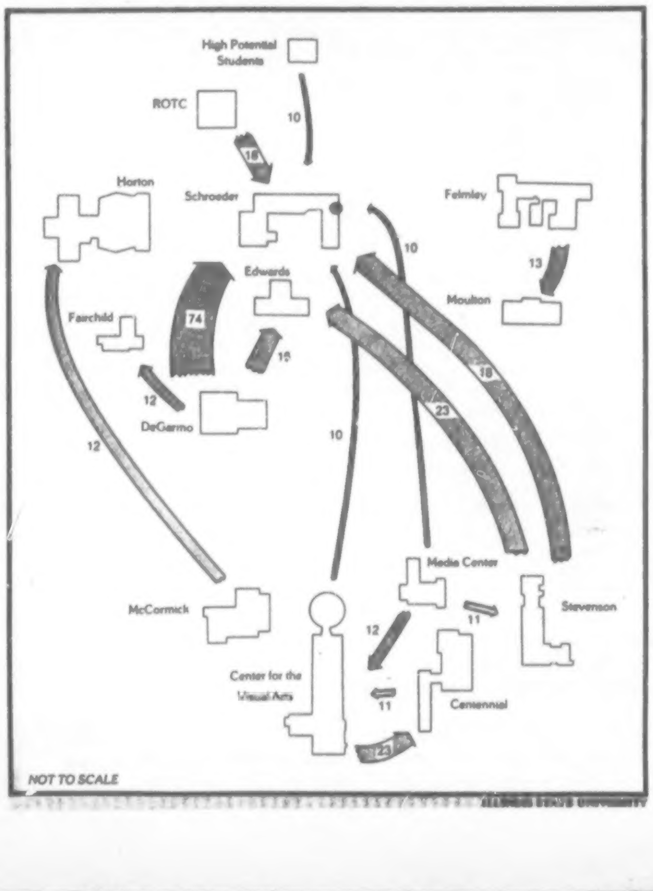
"Students never know what they're missing," he says.

Shedding Pounds

Mr. Sublett has some suggestions to make the lot of peripatetic faculty members easier. For one, the university could make carts available to faculty members so they could transport class materials comfortably.

He also says the university's "wellness" program could recognize the professors' contribution to fitness with certificates or T-shirts.

That may not be such a far-fetched idea. In just one semester, walking faculty members burned off 177 pounds of fat—the equivalent, Mr. Sublett notes, of a male professor of average height. —LIZ McMILLEN



ILLINOIS STATE UNIVERSITY

Map of Illinois State campus shows 15 top routes and number of trips taken by faculty members from one building to another.

Computers More Available at Selective Colleges

Continued from Page 13

dents, the survey found. Computers for faculty members may be in departmental offices, classrooms, or computer laboratories; most institution-owned computers for student use are in computer laboratories or computer centers. According to the survey, each student or faculty member had access to these machines an average of 3.3 hours a week.

By comparing the number of available computers to the number of faculty members and students, Ms. Lukesh figured that there was, on average, one institutionally owned microcomputer for every 16.7 students and faculty members. However, when estimates of student-owned and faculty-owned microcomputers were added to the number of machines available, the ratio dropped to 5.3 students and faculty members for each microcomputer—"demonstrating the significance of personal ownership in any assessment of the demand for machine access," Ms. Lukesh said.

The major use for microcomputers by students, faculty members, and staff members is word processing, respondents reported. The survey did not look at instructional use of computers, but EDUCOM's Mr. Gilbert said that future surveys would include questions about that.

Uses of microcomputers by students and faculty members

	Students	Faculty	Staff
Word processing	40%	42%	40%
Spread sheets	13%	15%	16%
Public-domain software	15%	15%	8%
On-campus communications	11%	13%	12%
Statistical packages	13%	15%	5%
"Freeware" or "Shareware"	13%	13%	7%
Data base manager	9%	10%	14%
Graphics	11%	10%	6%
Inter-campus communications	7%	10%	9%

More than half of the 211 institutions surveyed—57 per cent—required some or all students to take an introductory computer course in order to graduate.

The less competitive institutions were most likely to require such a course, especially for students majoring in business, computer science, and engineering, the survey found. Other fields that had computer-course requirements included general sciences, nursing and health, architecture, education, management, motel administration, and secretarial technology.

Institutions where computer courses are required

How selective	All students	Some schools	Some departments
Most	20%	7%	7%
Highly	9%	4%	17%
Very	15%	26%	15%
Competitive	13%	30%	23%
Less	23%	23%	16%
Non-selective	40%	40%	20%

More than 60 per cent of the colleges and universities surveyed indicated that they had negotiated or were negotiating for site licenses—which permit the reproduction and distribution of software on their campuses—and 56 per cent of the institutions sold software. Of those, half sold the software at a discount.

A total of 154 institutions had adopted written policies about illegal access to software, and 142 had written policies about illegal copying of software. But most indicated that the policies were not very effective.

Effectiveness of policies against illegal access and copying

	Access	Copying
Very effective	33%	11%
Fairly effective	49%	51%
Not effective	1%	9%
Unclear	15%	26%

While many colleges and universities offered faculty members help in selecting and using instructional microcomputer software, few institutions had formal plans or programs for integrating microcomputers into the curriculum.

Most institutions that offered assistance in software use offered instruction, often in scheduled classes or seminars, or consultants who could answer specific questions.

Institutions providing software assistance

Instruction	83%
Consultants	83%
Hot-line	40%
On-line consultants	13%

Copies of the executive summary of *Survey of Microcomputer Use in Higher Education*, to be released next month, are $7.50 from Susan S. Lukesh, Peat Marwick Main and Co., 345 Park Avenue, New York 10154. The full report will be priced at $45 for EDUCOM members, $125 for other institutions of higher education and not-for-profit organizations, $495 for EDUCOM corporate associates, and $1,195 for others.

Mich. Study Finds Most Computer Buyers Are Men, but More Women Want Courses

ANN ARBOR, MICH.

While standing in line one unseasonably warm weekend last February, 1,467 would-be purchasers of Apple Macintosh computers at the University of Michigan filled out a questionnaire that resulted in one of the first comprehensive looks at who is buying and using microcomputers on a campus where computers are not required and computer purchases are not strongly recommended.

The nearly 2,000 people who lined up to buy their computers were responding to discounts of up to 52 per cent—greater than the special discounts usually offered on the campus—in an experiment that allowed the university to set up an efficient distribution system for large-volume purchases and allowed Apple Computer, Inc., to cut prices with manufacture-on-demand and just-in-time-delivery systems.

'A Very Broad Set of People'

While the survey results were not surprising, they did confirm university officials' beliefs that microcomputer usage was not limited to a few technical experts.

"It is a very broad set of people who are using the machines," said Gregory A. Marks, deputy vice-provost for information technology.

The majority of the purchasers—58.8 per cent—were male. More than three-fourths of all purchasers were buying their first microcomputers, but of the new buyers, proportionally there were more women than men.

"Even though the men outnumbered the women, the gap between the sexes was narrower than that observed in other surveys of the U-M computing population," the survey report said.

"Women were also more interested in taking courses in computer use," Mr. Marks said. "It looks like what is going on is that women are putting more time and energy than the men into upgrading their skills. They have a real desire that is absent in the male population."

71 Pct. Were Students

Other findings of the survey:

► Nearly 60 per cent of the men who already had computers said they would use both machines; more than 60 per cent of the women who had computers said the Macintosh would replace their old machines.

► Juniors and seniors were most likely to be buying a computer for the first time.

► Students accounted for 71 per cent of the purchasers; of the remaining 29 per cent, two-fifths were faculty members, and three-fifths were staff members.

► Among the students, 14.9 per cent were freshmen, 11.8 per cent sophomores, 11.4 per cent juniors, 22.9 per cent seniors, and 37.6 per cent graduate students.

► Most purchasers said they would use their computers more for work or studies than for personal computing, although men were less likely to do so than women.

► Four per cent of the purchasers said they were experts on the Macintosh; 30.2 per cent said they were very familiar with the machine; 48.9 per cent said they were "somewhat" familiar with it; and 16.9 per cent did not know how to use it.

► More women than men planned to take classes on using the Macintosh.

► Almost all purchasers—98 per cent—said they would use the Macintosh for word processing. Other proposed uses:

Graphic arts	63.3%
Games	60.3%
Data-base management	57.0%
Communication	53.5%
Statistics	52.3%
Programming	47.1%
Business graphics	42.4%
Music	25.0%

—JUDITH AXLER TURNER

59 Colleges Offer 'Scholar's Passport'

DUBLIN, OHIO

Faculty members at 59 colleges and universities that are members of the Research Libraries Advisory Committee of O.C.L.C.—the Online Computer Library Center—will be able to check out books at any library at any of the institutions with a new library card issued by the committee.

Elaine F. Sloan, dean of libraries at Indiana University at Bloomington—one of the 59 institutions—calls the new library card a "scholar's passport."

"It will enable faculty members to cross institutional boundaries," she says.

Currently, faculty members who want to check books out of a library at another college or university must receive special permission from the library.

The new card will short-cut the process, Ms. Sloan says, making it easier for faculty members to use other research libraries.

IDEAS

By Zoë Ingalls

- New approaches to literary classics
- Analysis of inability to read critically

HIS IDEALISM is shattered as he wrestles with a typical adolescent identity crisis.

She is torn between values of childhood and adulthood. She wonders how she can remain an obedient daughter, yet be true to her young lover. Devastated by her moral dilemma and emerging sexuality, the teenager has a breakdown and kills herself.

Are these characters in the latest made-for-TV movie? It has a contemporary ring, but it's an old story: The girl is William Shakespeare's Ophelia; the boy, Hamlet, her equally ill-fated lover.

Together they are an object lesson in "Classics in British Literature," a three-week program to be offered at Santa Clara University this summer that is designed to show high-school teachers new ways to teach literature and help their teenage students gain insights into their own problems by seeing them reflected in the classics.

EDWIN BOOTH AS HAMLET: GEBBIE & CO.

"New approaches to classics can help students develop verbal and analytical skills, plus enable them to explore questions about family bonds, personal identity, loyalty, and commitment," says Diane E. Dreher, an associate professor of English and director of the program.

Ms. Dreher will be assisted by two other English-department faculty members and a marriage-and-family counselor experienced in both adolescent development and violence prevention.

In addition to *Hamlet*, the teachers will examine Shakespeare's *Twelfth Night*, James Joyce's *A Portrait of the Artist as a Young Man*, and selected poems of John Donne.

"In *Hamlet* and *Twelfth Night* young people find themselves deprived of viable adult role models," says Ms. Dreher. "They either find their own answers and affirmations or are destroyed by uncertainty and self-doubt.

"Similarly, in Joyce's *A Portrait of the Artist as a Young Man*, Stephen Daedalus casts away his old belief system and goes on an odyssey of self-discovery to develop himself and his talent. In a personal sense, each of these works portrays a renaissance—the birth of adulthood when a young person realizes that he or she must make the difficult decisions about love, work, and meaning."

Santa Clara will select 20 high-school teachers to participate in the program. Those who complete it will receive eight continuing-education credits plus a $750 stipend. The program is being paid for with a grant from the California Council for the Humanities.

For more information, contact Diane E. Dreher, associate professor of English, Santa Clara University, Santa Clara, Cal. 95053.

■

IN RECENT YEARS, many experts have reported what they perceive as a massive growth in the number of adults who are functionally illiterate—that is, they lack the basic reading and writing skills necessary to function in everyday life.

Some reports have said that as many as a fourth of American adults cannot read well enough to follow a bus schedule or write well enough to make out a check.

According to Harold L. Herber, a professor of education at Syracuse University, the functional-illiteracy problem has been blown out of proportion. He and other faculty members have banded together to analyze and, they hope, begin to solve what a much more significant dimension of adult illiteracy: the inability to read critically.

Through a new Interdisciplinary Institute on Literacy, which Mr. Herber will direct, the faculty members will conduct research and eventually develop programs, instructional materials, and new teaching methods aimed at "enhancing literacy."

"We want to discover what is necessary for people to be successful in whatever they do—whether it's somebody on the line or somebody in the executive suite," Mr. Herber says.

Some new studies show that true functional illiteracy is not as prevalent as some believe, Mr. Herber says. "The lack is in the higher levels of reading and thinking that are needed to infer ideas from what is read—to draw conclusions and to analyze the facts presented."

The institute's founders will first attempt to draw together people from business, industry, social-service groups, government, and the university to talk about the aspects of the problem that keep people from reaching their potential.

For more information, contact Harold Herber, professor of education, Reading and Language Arts Center, Syracuse University, 170 Huntington Hall, Syracuse, N.Y. 13244.

17 High-School and 2 College Football Players Died in 1986

CHAPEL HILL, N.C.

Two college athletes were among 19 players who died from football-related injuries in the 1986 season, two researchers have found.

While such deaths among college players remained level in 1986, the number of fatalities among high-school players rose from 5 in 1985 to 17. No sandlot or professional players died from football-related causes in 1986.

Frederick O. Mueller, professor of physical education at the University of North Carolina at Chapel Hill, and Richard D. Schindler, assistant director of the National Federation of State High School Associations, who conduct an annual survey of deaths and injuries from football, noted the increase with concern.

They pointed out, however, that the rise in football-related deaths was the first in nine years and that "the numbers are still low when compared with the late 1960's." At that time, it was not illegal for football players to use their heads directly in blocking and tackling. That change was made in 1976.

Ways to Reduce Danger

They offered no specific reasons for the increase in fatalities, but recommended several ways in which coaches and trainers could help reduce the danger of serious injury or death from football. Among them:

- ► Players should have medical examinations before being allowed to play or practice.
- ► Coaches and trainers should emphasize good physical conditioning, including neck-strengthening exercises.
- ► A physician should be present at all games and practices.
- ► Coaches and officials should see that game rules are strictly enforced.
- ► Coaches should emphasize the proper way to block and tackle to avoid head injuries.
- ► All injured players should receive immediate medical attention.

The survey makes a distinction between "direct" and "indirect" football-related deaths.

The former are those that result from injuries sustained during competition or practice. Indirect deaths are those caused by systemic failure as a result of exertion while playing football or by a complication that is secondary to a non-fatal injury.

In 1986, one of the two college fatalities was characterized as a direct death. A player died from a subdural hematoma after receiving a blow to the head in practice.

The other collapsed during practice and died the same day. An autopsy report related his death to sickle-cell trait and an enlarged heart.

The report is prepared annually for the National Collegiate Athletic Association, the American Football Coaches Association, and the high-school federation.

Here is how football-related deaths among college players have changed since 1977:

Year	Direct	Indirect	Total
1977	1	0	1
1978	0	1	1
1979	1	1	2
1980	0	0	0
1981	2	0	2
1982	0	3	3
1983	0	3	3
1984	1	0	1
1985	1	1	2
1986	1	1	2

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Athletic Calendar

Meetings

May 21-23—Counseling: Fourth Annual Conference on Counseling Athletes, Springfield College, Springfield, Mass. Contact: Al Petitpas, Athletic Counseling, Springfield College, Springfield, Mass. 01109; (413) 788-3325.

May 22-25—History of sport: Annual convention, North American Society for Sport History, Columbus, Ohio. Contact: Richard C. Crepeau, Department of History, P.O. Box 25000, University of Central Florida, Orlando, Fla. 32816.

May 29-31—Football: Annual meeting, College Football Association, Hyatt Regency Hotel, Dallas. Contact: College Football Association, 6688 Gunpark Drive, Suite 201, Boulder, Colo. 80301-3339; (303) 530-5566.

June 4-7—Psychology of sport: Annual meeting, North American Society for Psychology of Sport and Physical Education, Simon Fraser University, Burnaby, British Columbia, and University of British Columbia, Vancouver. Contact: David Goodham, Kinesiology, Simon Fraser University, Burnaby, British Columbia V5A 1S6; (604) 291-4253.

June 7-10—Governance: Annual meeting, National Association of Collegiate Directors of Athletics, Town and Country Hotel, San Diego. Contact: Dorothy Sikkila, NACDA, P.O. Box 16428, Cleveland, Ohio 44116; (216) 892-4000.

June 10-17—Governance: Annual meeting, Canadian Interuniversity Athletic Union, Brock University, St. Catharines, Ontario. Contact: Chris Critelli, Athletics, Brock University, St. Catharines, Ontario L2S 3A1; (416) 688-5550.

Championships

April 23-25—Men's gymnastics: National Collegiate Athletic Association, University of California at Los Angeles.

April 24-25—Women's gymnastics: Division I, National Collegiate Athletic Association, University of Utah.

May 1-2—Men's volleyball: National Collegiate Athletic Association, University of California at Los Angeles.

May 1-3: Women's slow-pitch softball: National Junior College Athletic Association, George C. Wallace State Community College.

May 3-9—Women's tennis: Division II, National Collegiate Athletic Association, California State University at Northridge.

People in Athletics

Benny Dees, men's basketball coach at U. of New Orleans, to men's basketball coach at U. of Wyoming.

Kyle DeGregorio, men's basketball coach at East Stroudsburg U. of Pennsylvania, has resigned.

Samuel L. Dixon, assistant men's basketball coach at Davidson College, to men's basketball coach at Denison U.

Tommy Gaither, men's basketball coach at Baptist College at Charleston, to men's basketball coach at Morehead State U.

William Macdermott, football coach at Wesleyan U., has resigned.

Rick Majerus, former men's basketball coach at Marquette U., to men's basketball coach at Ball State U.

Tony McAndrews, men's basketball coach at Colorado State U., has resigned.

Chris McKee, women's swimming and diving coach at Villanova U., has retired.

Gary Moss, men's basketball coach at West Texas State U., to men's basketball coach at Sam Houston State U.

Richard H. Perry, former athletic director at U. of Southern California, to athletic director at U. of California at Riverside.

Tom Sheridan, assistant baseball coach at James Madison U., to baseball coach at Mary Washington College.

Mike Steele, men's basketball coach at DePauw U., to men's basketball coach at East Carolina U.

Matt Vonderbrink, assistant men's basketball coach at Centre College of Kentucky, to men's basketball coach at Lynchburg College.

Dave Williams, men's golf coach at U. of Houston–University Park, has resigned.

NOTE

ONLY THE FOLLOWING PAGES OF THIS

PUBLICATION HAVE BEEN FILMED

Cov. 1, pgs. 33, 34

5/7/87 C2175-1 A

THE CHRONICLE

of Higher Education.

ISSN [illegible]

May 6, 1987 • $1.95
Volume XXXIII, Number 34

News Summary

Articles on inside pages

The Jefferson Lecturer, Forrest McDonald, became an expert on the Constitution by immersing himself in 18th-century works. Story on Page 6.

Members of the National Academy of Sciences have again rejected the nomination of a Harvard political scientist. Story on Page 6.

Colleges are increasingly trying mediation as a way to settle internal grievances. Story on Page 14.

The Office for Civil Rights has found that many colleges lack satisfactory systems for recruiting black faculty members. Story on Page 19.

The chairman of the House Postsecondary Education Subcommittee visits a college campus to observe for himself what the problems are. Story on Page 19.

A new study of giving by wealthy Americans assesses the future of foundations. Story on Page 33.

Professional schools are helping pay off student loans of alumni who choose public-interest careers. Story on Page 37.

Brown University students are spearheading a drive to abolish or reform the Scholastic Aptitude Test. Story on Page 37.

The sociologist who organized the boycott of the 1968 Olympics has formed a group to monitor the hiring of black college coaches and sports administrators. Story on Page 40.

Universities in South Korea have long been as much political battlegrounds as places of learning. Story on Page 44.

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Fearing Loss of Public Confidence, Some Colleges Change Ways They Deal with Their Constituencies

They undertake image-building efforts, although some observers say the problem isn't critical

By STACY E. PALMER

Fearful that Americans may be losing confidence in higher education, college officials are changing the ways they deal with the press, policymakers, and the public.

Rapid increases in tuition costs, scandals in college athletics, and skepticism about the quality of higher education are just three of the issues that have spurred harsh criticisms in the nation's editorial pages, on Capitol Hill, and elsewhere. College lobbyists have been accused of whining and behaving like the representatives of any other special interest. Education Secretary William J. Bennett said last fall that "higher education's tendency to cry 'Wolf' so insistently and tiresomely" could eventually erode Congressional support for college and universities.

More and more, college leaders say, they are required to explain and justify the way colleges and universities behave.

Says Judith Rowan, associate chancellor for public affairs at the University of Illinois at Urbana-Champaign: "For a long time higher education took for granted that the public understood what it does and that it performs a function of value to society. We didn't work very hard at making the case."

'We Have to Be More Aggressive'

That has changed. "The public is less willing to just accept what we do at face value," says Ms. Rowan. "We have to be more aggressive about explaining what higher education does and why we do it."

"It used to be that as soon as we said something would hurt us, it would be put aside," says Robert K. Durkee, vice-president for public affairs at Princeton University. "Now people expect an informed analysis of why it would hurt."

Not everybody agrees that public perceptions of higher education have become noticeably more negative.

"I don't buy it," says Clark Kerr, former president of the University of California and a veteran observer of the public mood regarding higher education. "I think it's more that people feel they have to portray something as a 'crisis' just to get anything done."

Even so, the concern has spawned many changes on the campuses and within the major associations that represent higher education. Increasingly, colleges are appointing senior-level people to handle public relations—a job that was previously viewed on many

Continued on Page 24, Column 1

Leaders of Outlawed African National Congress Urge Americans to Shun All Academic Contacts with Apartheid Institutions

By STEVE ASKIN

HARARE, ZIMBABWE

Leaders of South Africa's outlawed African National Congress have called anew on Americans and other foreigners who may be considering academic connections in that country to avoid all links with apartheid institutions and to consult with South Africa's "democratic movement," including student groups and university staff members, before pursuing any involvement.

The A.N.C., which has its headquarters in Lusaka, Zambia, does not seek a "blanket boycott" that would isolate South Africans from the rest of the world, said Thabo Mbeki, a leader of the organization's National Executive Committee. But he reaffirmed support for a complete end to foreign investment in South Africa and called on outsiders to sever all ties with institutions that serve the apartheid system.

As an example, Mr. Mbeki said it would be wrong for an American computer expert to lecture at the white-dominated University of the Witwatersrand, even though that institution has sought to help black students. On the other hand, the A.N.C. leader said, a medical professor could appropriately speak in South Africa to the National Medical and Dental Association, a group that has worked to expose the mistreatment of political prisoners.

Mr. Mbeki was one of several A.N.C. officials to participate in wide-ranging interviews with *The Chronicle* in recent weeks, here and in neighboring Zambia. Their assessment recalled warnings last fall by about two dozen black education leaders from South Africa that some American programs designed to help blacks there had been ill conceived *(The Chronicle,* December 10, 1986).

In their recent interviews, the A.N.C. officials acknowledged that the scope of the "cultural boycott" supported by the African National Congress was a subject of continuing discussion among its constituents and allies. Some A.N.C. officials have argued for an absolute ban on academic contacts with South Africa by all foreigners and their institutions.

One advocate of a total boycott is Jack

Continued on Page 47, Column 1

Scores of students were hurt in confrontations with police at the University of Cape Town last week. Story on Page 44.

Some Hail 'Computational Science' as Biggest Advance Since Newton, Galileo

By JUDITH AXLER TURNER

Its champions call it "computational science" and claim that it is the greatest breakthrough in scientific method since Sir Isaac Newton invented theoretical science and Galileo before him set down the techniques of observational and experimental science.

Computational science is science done on a computer. A computer can serve as a laboratory for researchers who cannot experiment with their subjects, and as a calculator for those who otherwise might need centuries to solve some problems mathematically—if they could be solved at all.

ment with black holes or with four-dimensional figures by drawing pictures of what happens when they tweak and play with such phenomena. With their ability to do millions of computations a second, computers also let researchers hammer away repeatedly at mathematical theories that have been known for years but never solved.

NSF Invests $22-Million

In support of all this, the National Science Foundation is putting $22-million into a program in computational science that stretches across disciplines and across the agency.

tational science differs in a qualitative way from what they have done before, others say that it is just a faster way of doing what they have always done.

But whether they think they are doing

Continued on Page 8, Column 1

Southern Methodist U. Looks to the Future

A football scandal has tarnished Southern Methodist University's image, but many people on the campus are optimistic about the future. Story on Page 41.

Give & Take

A watchdog group, the
ational Committee for Responsive
hilanthropy, says that
ontributions made on the job to
arities other than the United Way
pped $100-million for the first time
1986, a 19-per-cent increase over
e previous year.

The development, the group said,
arked a revolution in workplace
nd raising.

The organization issued a report
giving to "alternative charities"
a Washington conference it co-
onsored with the National Black
nited Fund. The meeting was held
the same time the United Way of
merica was marking its 100th
niversary.

Robert O. Bothwell, executive
rector of the committee, said
ternative charities raise funds for
ograms not being served by the
nited Way, particularly projects
aling with such issues as social
stice and the environment. There
e now 85 alternative charities
erating in 32 states, and a
owing number of them are being
lowed to raise funds by payroll
ductions at colleges and
iversities.

Giving to alternative charities via
yroll deduction has grown 184 per
nt in dollar volume in the past five
ars, while contributions to United
ay campaigns have grown 54 per
nt, the group's report said.

•

United Way has been honored
the U.S. Postal Service with a 22-
nt stamp commemorating its 100
ars of raising funds for human-
rvice programs.

The stamp, which bears the
essage "Uniting Communities,"
as issued at a special ceremony in
ashington last week. The
oceedings were part of United
ay's centennial conference, which
cused on the role of volunteers in
merican society.

•

November is now rated the top
onth for fund-raising mailings.

The Kleid Company, brokers and
anagers of direct-mail lists, found
at 16.6 per cent of all fund-raising
peals mailed in the past 12 months
ere sent last November.
eviously, February traditionally
d the highest volume of fund-
ising mail.

The company's "1986-87
asonality Study" was based on the
lume of pieces mailed. However,
a report on its study the company
id organizations scheduled their
ailings for the time of year that was
ost likely to produce the greatest
sponse.

"No organization will continue
mail in volume in a season that
amatically increases the cost of
ing business," said the company.

After November, the months
ith the biggest volume of fund-
ising mail in the past year were
bruary, March, and September.
n average over the past five years,
e top months for mailing fund
peals were February,
ptember, November, and
ctober, the company found.

Philanthropy

Health of Foundation Philanthropy Assessed in New Study of Giving by Rich Americans

It seeks to document economic and social reasons for slowdown in birthrate of new funds

By PAUL DESRUISSEAUX

Teresa Odendahl is an anthropologist who spent the past three years examining aspects of a cultural ritual that is particularly American: giving money away.

Ms. Odendahl was manager of a major research project designed to assess the health of foundation philanthropy in the United States.

Through the project—an umbrella for seven separate studies—a team of scholars sought to document the slowdown in the birthrate of foundations, and to identify some of the economic, regulatory, and social reasons behind it.

Among other things, the researchers also measured how well the assets of some of the largest foundations had held up, and sampled the attitudes of very wealthy individuals toward organized philanthropy.

125 Millionaires Interviewed

Getting the rich to talk about their charitable activities, says Ms. Odendahl, took a lot longer than she had anticipated. "It was a year before we got our first interview," she says. "But we felt the only way to understand these trends would be to talk to people about them."

Eventually, more than 125 millionaires, most of whom regularly give large sums to charity, were interviewed for the study, as well as 100 advisers to wealthy people. What they had to say is discussed in the final report on the projeci, which the Foundation Center has just published as a 325-page book. Called *America's Wealthy and the Future of Foundations,* it was edited by Ms. Odendahl.

Among the study's findings:

► Tax considerations, while important, play a smaller role in a donor's deliberations about establishing a foundation than they do in decisions about other forms of charitable giving.

FOUNDATION NEWS

Elizabeth Boris: "Legislation affecting foundations has been promulgated with no idea of what impact it might have because data simply did not exist."

DAVID OTTENSTEIN, YALE UNIVERSITY

Teresa Odendahl: Throwing light on "a seriously neglected subject of study: charitable decision-making by persons of wealth."

► Many wealthy people today prefer making direct contributions to charitable organizations to using a foundation as a vehicle for their philanthropy.

► Altruism as well as a desire to have some control over how their charitable dollars are used are what often lead wealthy people to form foundations.

► The idea of establishing a foundation almost always originates with the donor and not a lawyer, accountant, or other adviser.

► Inflation has eroded the assets of many of the large foundations created in the first half of the century. Only six very large foundations—with assets of $100-million or more—have been established since 1962.

► Several dozen major foundations hold most of the assets, dispense most of the grants, and employ most of the professionals who work ir organized philanthropy. Small foundations make up the bulk of the field, but hold a small proportion of the assets, have few full-time employees, and

Continued on Following Page

Columbia Gets $25-Million for Minority Scholarships; Knight Foundation Backs 7 Programs for Journalists

Knight

AKRON, OHIO

The Knight Foundation has given a total of $8.25-million to seven universities to support mid-career education programs designed to improve the expertise of practicing journalists.

The grants include two of $3-million each to preserve what the foundation called a pair of "prestigious but endangered" programs—the Vannevar Bush Fellowships at the Massachusetts Institute of Technology, for reporters specializing in science and technology, and the Walter Bagehot Fellowships at Columbia University, for business writers.

Other grants will strengthen or help establish programs at the Universities of Maryland and Michigan, and at Harvard, Stanford, and Yale Universities. Most of the programs enable the fellowship recipients to spend a year at the universities.

"We believe a major, comprehensive effort to strengthen the credentials of journalists is an effective—and long-lasting—step toward insuring excellence in the press," said James L. Knight, chairman of the foundation.

The Knight Foundation, which had $462-million in assets at the end of 1986, was established by James Knight and his late brother, John S. Knight. The two founded Knight Newspapers, Inc., now Knight-Ridder, Inc., which owns 34 daily newspapers, 8 television stations, and other businesses. The private foundation is not a part of the company.

Total Reaches $13-Million

The latest grants bring to $13-million the total given by the foundation for mid-career training for journalists.

A $4-million grant to Stanford University several years ago established the John S. Knight Fellowships there, and an earlier grant of $750,000 helped finance a similar

Continued on Page 36, Column 1

Columbia

NEW YORK

Columbia University last week received $25-million from one of its graduates to support scholarships for members of minority groups.

The gift, from John W. Kluge, is the largest donation ever received by the university. Mr. Kluge is chairman of the Metromedia Company, a broadcasting and communications business.

Michael I. Sovern, president of Columbia, called the gift "the most enlightened and remarkable commitment to minorities in our experience."

He said the gift would provide "a wonderful lift" to the university's efforts to continue its "need-blind" admissions policy for undergraduates, under which students are admitted regardless of their ability to pay.

Mr. Sovern said the gift would help in-

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Health of Foundation Philanthropy Assessed

Continued from Preceding Page

are usually run by family members and friends, or by lawyers and bankers.

Close to 24,000 private foundations are in operation today, according to the Foundation Center, but only about 4,400 of them have assets of at least $1-million or make annual grants of $100,000 or more. The latter group controls some $64-billion in assets, or 95 per cent of the funds held by all private philanthropies, and distributes 85 per cent of the grants—$4-billion worth each year.

The research project, the largest on foundation philanthropy ever conducted, was sponsored by the Council on Foundations, a national association of grant makers, and the Yale University Program on Non-Profit Organizations. Grants from the W. K. Kellogg, Andrew W. Mellon, and Charles Stewart Mott Foundations helped to finance it.

'Ebb and Flow' over 30 Years

The apparent decline since the late 1960's in the birthrate of private foundations—particularly those described as large, with assets of at least $1-million or annual giving of $100,000 or more—had been previously reported by both the U. S. General Accounting Office and the Foundation Center. The study reports that the decline began well before the passage of the Tax Reform Act of 1969 and continued at a greater rate afterward. The 1969 tax act included provisions that were widely viewed as major impediments to the creation of private foundations.

"There has been an ebb and flow in the creation of foundations of all sizes over the past 30 years," writes Ms. Odendahl, "but large foundations in particular are not being established at the same rate as in the past."

Following are the number of large foundations created and the total number of foundations existing, by decades, since 1910. The tabulation counts only foundations that in 1983 had assets of at least $1-million or made annual grants totaling at least $100,000.

Increase in large foundations

	Created	Total
1910-1919 ...	44	95
1920-1929 ...	108	203
1930-1939 ...	164	367
1940-1949 ...	571	938
1950-1959 ...	1,120	2,058
1960-1969 ...	766	2,824
1970-1979 ...	401	3,225
1980-1983 ...	135	3,360

Today's typical foundation, the researchers report, was formed by a living donor in 1959 with an endowment of $100,000. Most existing foundations were established with small initial gifts and grew through additional contributions from the donor, through bequests, and through appreciation of assets. More than half of the foundations with current assets of $100-million or more were formed with a gift of less than $1-million.

Foundations established since 1970 are more likely to have been formed by bequest than those set up earlier. That trend, the report suggests, could have major consequences for the future growth of foundation assets, since a major source of such expansion has been gifts made by donors to their own philanthropies during their lifetimes.

The assets held by all foundations declined in their real value in the 1970's and until 1983. Poor stock-market performance and stringent federal payout requirements were partly responsible for that circumstance, but so was a drop in the foundation population of more than 10,000 during that period. The years immediately following the 1969 tax act had the highest incidence of foundation "terminations."

Following are the number of foundations of all sizes that folded in the years 1970 through 1982:

Foundations that folded

1970	883	1977	618
1971 ...	1,506	1978	585
1972 ...	1,733	1979	616
1973	946	1980	555
1974	952	1981	455
1975	792	1982	151
1976	784	Total ..	10,576

Four times as much money was awarded in grants by foundations in 1982 as had been 20 years earlier, but the increase was found to be only slight in terms of dollars of constant purchasing power.

In the same period, the growth of the assets held by 954 foundations with assets in 1982 of $5-million or more was found to be inconsequential in real dollars.

Since 1983, a combination of good stock-market performance and a loosening of payout requirements contributed to the growth of foundation assets.

Several Reasons for Slowdown

The researchers identified several factors responsible for the slowdown in the growth and formation of foundations over the past three decades. They included changes in laws and regulations directly affecting the operation of private foundations, in tax laws that influenced charitable giving by wealthy people, and in attitudes toward philanthropy.

Among the specific factors cited:

► Increased regulation of foundations.

► Decreased tax deductibility of contributions to them.

► The growth of alternatives to foundation philanthropy, such as gifts made directly to charitable organizations, which offer greater tax deductibility.

► Advice from lawyers, who were found to recommend rarely the formation of a foundation.

► Declines in individual tax rates.

► A greater desire for direct personal involvement in charitable causes, especially by younger wealthy people, "which has led to some rejection of the institutional aspects of formal grant making."

► The "depopularization" of foundations as a result of Congressional hearings and public attacks on them.

As for donors who established foundations, the researchers identified 20 motivating influences on their decisions to do so, which were ranked and weighted. "Personal philosophy," including religious heritage and concern for the welfare of others, ranked first. A desire to establish a vehicle for the systematic conduct of charitable giving ranked second. Tax incentives ranked sixth. Social pressures and political beliefs were near the bottom of the rankings.

"We can never know the 'true' philanthropic motives of the wealthy or their reasons for establishing foundations," writes Ms. Odendahl. "In the interviews they told us about their ideologies, as well as what they wanted us to hear." But while not conclusive, she adds, the reported motives "help to throw light on a seriously neglected subject of study: charitable decision-making by persons of wealth."

Researchers associated with the project say their findings might help stop the decline in the birthrate of foundations because, for the first time, reasons for the slowdown have been documented.

"In the past legislation affecting the creation of foundations has been promulgated with no idea of what sort of impact they might have because data simply did not exist," says Elizabeth T. Boris, vice-president for research and planning at the Council on Foundations, which surveyed some 1,000 foundations for the project. "Now we can at least point to the impact previous legislation appears to have had on the formation of new foundations."

The Council on Foundations incorporated some of the study's findings into a campaign it has begun to encourage the formation of more grant-making organizations. A key element of the campaign is an effort to educate lawyers about the benefits and importance of foundations.

"In many instances a foundation is the best vehicle for the philanthropy of a donor who wants to know where his money goes," says Ms. Boris, "and we need to help lawyers see this."

Foundation officials say that while philanthropy in any form is valuable, a gift by an individual to establish a foundation will, over time, make it possible to do more for the public good than a one-time gift to a particular charity.

Strong Supporters of Education

Wealthy donors, the researchers found, were strong supporters of education.

"When we asked people what their special interests were, education, as always, ranked among the highest," says Ms. Boris, who, with Ms. Odendahl, was largely responsible for conducting the interviews with the wealthy.

"Our surveys indicated that most individuals who had made major gifts before establishing their foundations had made them to their alma maters," says Ms. Odendahl. "People get involved in giving once they are asked to give, and colleges and universities are the most sophisticated about doing that."

Sometimes a donor is torn between making a direct major contribution to a college or using the money to form a foundation, but Ms. Odendahl says it is misleading to think of the two as competitors because foundations do support higher education. "And quite often a family will make a major gift to higher education outside of their foundation," she adds.

The wealthy people interviewed were not representative of rich people in the United States, "but they were representative of those who practice philanthropy, who have been involved in support for charity in some way," says Ms. Odendahl.

Surprising Amount of Candor

She was surprised, she says, by the candor of those interviewed, considering how difficult it was to get to see many of them. None of those interviewed are identified by name.

"I expected some information to be much harder to elicit than it was, such as the degree of entitlement they feel, or the amount of control they wanted to have over organizations they support," she says.

Besides Ms. Boris and Ms. Odendahl, the researchers who contributed chapters to the book were John A. Edie, vice-president and general counsel of the Council on Foundations; Ralph L. Nelson, a professor of economics at Queens College of the City University of New York; and Francie Ostrower, a doctoral candidate in sociology at Yale University and a researcher in its Program on Non-Profit Organizations.

Also, Gabriel Rudney, a senior research associate at the Yale program, and Eugene Steuerle, director of finance and taxation projects at the American Enterprise Institute for Public Policy.

Two foundation lawyers in Washington, Edward Jay Beckwith and Jana S. DeSirgh, prepared a "technical appendix" to the book on tax law and private foundations.

The data compiled for the project will be maintained and updated. "W don't plan to let this just sit there, says Ms. Boris.

A political scientist by trainin Ms. Boris is planning a follow-u study on elements of democratic th ory in the motivation of donors.

Ms. Odendahl, who is now execu tive director of the Women's Four dation of Colorado, is completing book on the culture of philanthrop and the political economy of charita ble giving in the United States that based on the interviews she conduc ed for the project.

Copies of *America's Wealthy an the Future of Foundations* are $34.9 each ($24.95 for paperback), plus $ for handling, and may be ordered d rectly from the Foundation Cente 79 Fifth Avenue, New York 1000 The toll-free telephone number (800) 424-9836.

Private Grants and Gifts

BOOTH FERRIS FOUNDATION

30 Broad Street, New York 10004

Computer science. For programs in computer science: $100,000 to Knox College.

Facilities. To expand and renovate the library: $100,000 to Berry College.

Humanities. For programs in the humanities: $75,000 to Upsala College.

Planning. For institutional planning: $100,000 to Wheaton College (Mass.).

HENRY LUCE FOUNDATION

111 West 50th Street, New York 10020

Art history. For dissertation fellowships in American art history: $40,000 each to Boston U., Columbia U., U. of Delaware, Graduate Center of City U. of New York, U. of Michigan, Stanford U., and Yale U.

JOHN D. AND CATHERINE T. MacARTHUR FOUNDATION

140 South Dearborn Street, Chicago 60603

Journalism. For fellowships for Latin American journalists: $150,000 over three years to Harvard U.

Visual literacy. For the film and television archive: $30,000 to U. of California at Los Angeles.

ANDREW W. MELLON FOUNDATION

140 East 62nd Street, New York 10021

Curriculum. For programs of cross-disciplinary studies: $700,000 to Emory U.

Disadvantaged. To enable advanced-placement teachers from secondary schools in disadvantaged areas to attend summer teaching institutes: $450,000 over four years to College Board.

Libraries. For the position of curator of books: $450,000 to Folger Shakespeare Library.

METROPOLITAN LIFE FOUNDATION

One Madison Avenue, New York 10010

Teacher education. For programs of teacher education: $35,000 to Brown U., $40,000 to City College of City U. of New York, $30,000 to New York U., $40,000 to U. of Pennsylvania, and $27,400 to U. of Wisconsin at Madison.

M. J. MURDOCK CHARITABLE TRUST

915 Broadway, Vancouver, Wash. 98660

Facilities. For a learning-resource center: $1.35-million to George Fox College.

PEW CHARITABLE TRUSTS

Suite 501
Three Parkway, Philadelphia 19102

Economics. For research and policy programs in economics and national security: $130,000 to American Enterprise Institute for Public Policy Research, $300,000 to U. of Chicago, $197,000 to Columbia U., $300,000 to Hoover Institution of War, Revolution, and Peace, $100,000 to Massachusetts Institute of Technology, $400,000 to Princeton U., and $500,000 to U. of Maryland.

—For research on the federal budget: $150,000 to Brookings Institution.

—For research and faculty development in economic education: $400,000 over two years to Princeton U.

Facilities. For renovation and construction: $200,000 challenge grant to Austin College, $300,000 to Bates College, $250,000 to Beaver College, $300,000 to Beloit College, $120,000 to Bryn Mawr College, $247,000 to Eastern Baptist Theological Seminary, $100,000 to Hillsdale College, $250,000 to Lafayette College, $850,000 to Lehigh U., and $200,000 to Muhlenberg College.

Health care. For research on hospital care: $349,000 over two years to New York U.

History. For the oral-history project in the school of law and diplomacy: $470,000 to Tufts U.

Libraries. For library-automation projects: $250,000 over three years to Center for Research Libraries.

—For the 18th-Century Short Title Catalogue: $300,000 over three years to Research Libraries Group.

Medical education. For the International Physician Leadership Development Program: $300,000 over three years to American Medical Student Association Foundation.

Non-traditional education. For support of programs: $200,000 to Council for Adult and Experiential Learning.

Nursing. For a study of the cost of baccalaureate and graduate nursing education programs: $374,000 to American Association of Colleges of Nursing.

—For the school of nursing: $126,000 to U. of Pennsylvania.

Nutrition. For programs in international nutrition policy: $450,000 over four years to Cornell U.

Religion. For a research project on the American Wesleyan/Holiness tradition: $311,000 over three years to Asbury Theological Seminary.

—To compile and publish the complete works of Jonathan Edwards: $307,000 over three years to Yale U.

Science education. For scientific equipment: $200,000 to Messiah College.

READER'S DIGEST FOUNDATION

Pleasantville, N.Y. 10570

Minorities. For support of programs in education: $150,000 to Hispanic Policy Development Project, $100,000 to National Association for the Advancement of Colored People, $50,000 to National Urban League, and $75,000 to United Negro College Fund.

SAN FRANCISCO FOUNDATION

500 Washington Street, San Francisco 94111

Arts. For a faculty position in painting: $76,800 to California College of Arts and Crafts.

L. J. AND MARY C. SKAGGS FOUNDATION

1330 Broadway, Oakland, Cal. 94612

Business education. For a professorship in retail studies: $500,000 to Santa Clara U.

CHARLES J. STROSACKER FOUNDATION

P.O. Box 2164, Midland, Mich. 48641

Research. For research by faculty members and students: $250,000 to Albion College.

GIFTS AND BEQUESTS

University of Alabama at Huntsville. For support of programs: $100,000 from Bob Heath and Doc Latham.

Albion College. For programs of faculty development: $50,000 from Michigan Bell Telephone Company.

—For a scholarship in music: $37,000 from Bernard A. Koether.

College of Saint Rose. For nursing scholarships: $200,000 to College of Saint Rose and St. Peter's Hospital (Albany, N.Y.).

Colorado School of Mines. Unrestricted bequest of $1-million from the estate of John Easthagen.

Lafayette College. For scholarships: $300,000 from RJR Nabisco, Inc.

Massachusetts Institute of Technology. For a professorship in management information systems: $1.5-million from Patrick J. McGovern.

University of North Dakota. For scholarships for medical students: $500,000 from the estate of Rusa Ruger.

Northwestern College (Iowa). For scholarships: $25,000 from First Reformed Church of Orange City, Iowa.

University of Redlands. For a professorship in business administration: $1-million from Richard and Ginnie Hunsaker.

Rollins College. For the library: $1.2-million from an anonymous donor.

University of Southern California. For a professorship in entrepreneurship: $1.5-million from Bernard L. Simonsen.

—For scholarships in the school of business administration: $123,750 from Henry W. and Phillis Simonsen.

Washington University (Mo.). For the capital campaign: $1-million from Carl Neureuther.

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THE CHRONICLE
of Higher Education.

May 13, 1987 • $1.95
Volume XXXIII, Number 35

SN 0009-5982

News Summary

Articles on inside pages

The Rev. Theodore Hesburgh began his formal goodbyes last week as he prepared to leave the presidency of the University of Notre Dame. Story on Page 3.

Connoisseurship has become the focus of increased attention by art scholars. Story on Page 6.

The supply of scientists and engineers may fall short of the demand by the late 1990's, according to a new study. Story on Page 7.

Geographers are looking for ways to reorient research in their field. Story on Page 9.

The effects of a 1980 Supreme Court ruling on collective bargaining are beginning to be felt at public colleges. Story on Page 16.

The main pension companies for higher education, T.I.A.A. and C.R.E.F., have formed a committee to consider requests for more flexibility in their retirement plans. Story on Page 16.

Florida universities have joined with five federal agencies to help streamline the process of monitoring research. Story on Page 29.

The head of the Howard Hughes Medical Institute has taken indefinite leave while trustees investigate his administration. Story on Page 39.

More than 650 athletes who failed to meet minimum academic standards to participate in college sports as freshmen are currently enrolled in Division I institutions. Story on Page 44.

Brazil's universities are beginning to evince a new spirit of inquiry and innovation. Story on Page 46.

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Vote in South Africa Leads 3 Universities to Close in Protest

First such action in the history of the 2 largest white campuses

By HELEN ZILLE

CAPE TOWN

In unprecedented actions, three South African universities closed during the country's whites-only parliamentary election last week—both to protest the nature of the election and to prevent injuries and property damage.

The closings included the first ever announced for political reasons by the Universities of Cape Town and the Witwatersrand—South Africa's largest, predominantly white campuses. Also closed was the University of the Western Cape, which has a majority of "colored," or mixed-race, students.

At the country's black institutions, preliminary reports indicated, the election was considered a "non-issue."

The Universities of Cape Town and the Witwatersrand issued statements calling for full democracy in South Africa, protesting the erosion of civil liberties, and stressing fears that severe casualties could occur if student demonstrations against the election were broken up by the police.

220 Students Arrested

The closings followed a week in which the police had moved onto the three campuses during protests against the killing by police of six black railway workers in Johannesburg and a South African military raid in Zambia.

In all, at least 220 students were arrested and scores injured by police whips, dog

Continued on Page 47, Column 1

'EXTRAORDINARY' INCREASE

Surge in Gifts by Individuals Pushes Private Aid to Colleges to $7.4-Billion

By PAUL DESRUISSEAUX

Private financial support for colleges and universities rose by a record $1.08-billion in academic 1985-86, thanks to a sharp increase in contributions from individuals.

A 25-per-cent jump in giving by alumni and other individual donors helped push total private support for higher education to an estimated $7.4-billion, a new high, according to the Council for Financial Aid to Education.

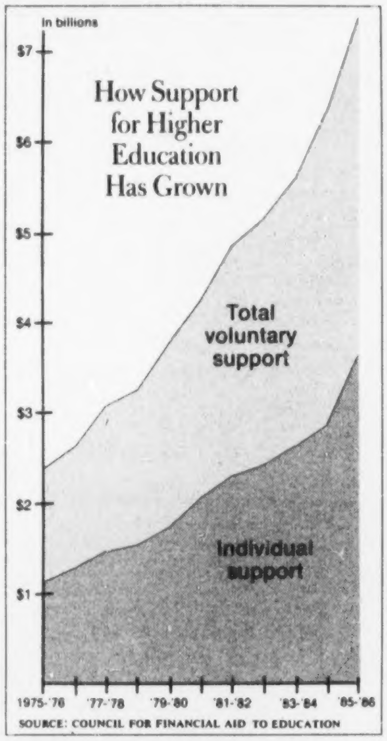
The total was 17 per cent more than the previous year and was one of the biggest one-year gains on record, said the council, which last week released the findings of its annual survey of voluntary support for education.

Colleges have raised their expectations about big contributions and are seeking them more aggressively. Story on Page 39.

Individuals were responsible for 48.8 per cent of all funds contributed to colleges and universities last year. Alumni donors gave an estimated $1.83-billion to their alma maters, 25 per cent more than the year before, and other individuals contributed $1.78-billion, 25.8 per cent over the previous year.

Calling the increase in individual giving "extraordinary," John R. Haire, president of the C.F.A.E., said it demonstrated that "Americans believe strongly in higher education" and remain convinced that colleges and universities need financial support from private sources.

"It's a very healthy sign," said Richard A. Edwards, vice-president for educational fund raising of the Council for Advancement and Support of Education, a co-sponsor of the survey.



How Support for Higher Education Has Grown

SOURCE: COUNCIL FOR FINANCIAL AID TO EDUCATION

Mr. Edwards said he was not surprised by the rise in individual giving. "That's where colleges are focusing their efforts," he said. "These numbers show that the

Continued on Page 40, Column 5

Benefits and Outside Income Boost College Presidents' Compensation, but in Some States, the Perks Sometimes Produce a Political Backlash

Political backlash

By CAROLYN J. MOONEY

When trustees of the State University of New York system wanted to show state officials that the chancellor's salary was far too low, they used Maine as a comparison.

"When the head of the seven-campus, 25,000-student Maine system earns $25,000 a year more than the SUNY system head, something is seriously wrong," the trustees stated in a letter written last June.

Something *was* wrong—in both states.

$500,000 at TIAA-CREF

SUNY's chancellor at the time, Clifton R. Wharton, Jr., has since resigned his $89,250 job to become chairman of the Teachers Insurance and Annuity Association and College Retirement Equities Fund, higher education's leading pension companies, where his salary is reportedly $500,000 a year. Jack E. Freeman also stepped down—after only two weeks on the job—because his $114,000 salary as chancellor of the University of Maine system caused a public outcry. His successor, Robert L. Woodbury, earns $96,000.

The Maine and New York cases illustrate the precarious balance that governing boards and state officials must strike when compensating executives of public higher-education institutions.

"You have a real paradox," says Patrick E. McCarthy, who was chancellor of the Maine system before Mr. Freeman was appointed and now works as a private consul-

Continued on Page 20, Column 1

Leading Texans Lend a Hand to Educators

Educators enlisted H. Ross Perot and other prominent Texans to fight—with apparent success—the Republican Governor's proposed college spending cuts. See Page 29.

Presidents' compensation

By SCOTT HELLER

WASHINGTON

Excellent benefits and pay from outside sources have made up some of the drastic difference between the earnings of college and university presidents and those of their counterparts in industry, a new survey has found.

While they have enjoyed healthy raises recently, presidents in academe still make a fraction of what chief executives earn in the profit-making sector, the survey indicates. But nearly a third of the campus chief executives report that they make extra money in the form of directorships, consulting fees, and honoraria.

As Much as $150,000 a Year

The average chief executive makes $10,000 a year in outside income, though some make as much as $150,000 a year extra, according to a survey of 1,429 chief

Continued on Page 22, Column 1

Salaries, Houses, Cars, and Other Benefits of Top State-University Executives

Compiled by Jennifer A. Galloway, Courtney G. Leatherman, and Carolyn J. Mooney

The officials listed below are either heads of the largest public universities or systems in their states, or are the highest paid public-university executives in their states. Heads of medical schools and other professional schools have been excluded. Some benefits, as noted, are paid for by tax-exempt foundations that have been set up by institutions to raise money and to receive private gifts. Enrollment figures are for fall 1986.

ALABAMA

Thomas A. Bartlett
chancellor,
University of Alabama System
(3 campuses; 36,664 students)

Salary: $125,000
Benefits: Given house on campus, maid service, cook; drives Chevrolet Caprice provided by state; uses private money raised by foundation to pay for membership in yacht club, dinner club, and social club where official business is conducted, for spouse's car, and for liquor served at official functions.

ALASKA

Donald D. O'Dowd
president, University of Alaska
Statewide System of Higher Education
(3 university campuses and 11 community colleges; 31,587 students)

Salary: $100,000
Benefits: System provides house on university property; five-year-old Mazda; and official entertainment account.

ARIZONA

J. Russell Nelson
president,
Arizona State University
(1 campus; 41,540 students)

Salary: $115,000
Benefits: Given house and 1985 Oldsmobile (which cannot be used for personal vacations); family receives tuition waivers at state institutions; foundation money available for entertaining as needed.

ARKANSAS

Ray Thornton
president,
University of Arkansas System
(5 campuses; 30,546 students)

Salary: $86,996
Benefits: Lives in university-owned house; drives Mercury Topaz donated by local automobile company for out-of-town university business only; uses foundation money for entertaining and to buy liquor for official events.

CALIFORNIA

David P. Gardner
president,
University of California
(9 campuses; 152,167 students)

Salary: $189,100
Benefits: Receives annual housing allowance of $25,021 and 25-year mortgage held by the Board of Regents; is reimbursed for housing maintenance, which cost $1,500 monthly last year; leases 1986 Buick at university expense; can use foundation money for office expenses, travel, and entertainment.

COLORADO

E. Gordon Gee
president,
University of Colorado
(4 campuses; 40,895 students)

Salary: $100,000
Benefits: Has been receiving $24,000 annual housing allowance while waiting for university foundation to complete construction of new president's house; drives Cadillac Seville provided by local car dealer; wife receives some travel expenses.

CONNECTICUT

John T. Casteen, III
president,
University of Connecticut
(5 campuses; 24,161 students)

Salary: $105,000
Benefits: Lives in university-owned house; has two full-time employees to help with maintenance and entertainment; drives state-owned Chevrolet Chevette for business and Chevrolet Caprice provided by foundation for personal use; uses foundation money to supplement entertainment budget; belongs to professional club at university expense.

DELAWARE

E. Arthur Trabant
president,
University of Delaware
(1 campus; 18,631 students)

Salary: $110,000
Benefits: Lives in university-owned house; is provided with part-time household help; drives Buick provided by university; wife has part-time secretary.

FLORIDA

Charles B. Reed
chancellor,
State University System of Florida
(9 universities; 148,940 students)

Salary: $114,000
Benefits: No housing or car; can use foundation money if raised by the Board of Regents rather than by an individual institution.

GEORGIA

H. Dean Propst
chancellor,
University System of Georgia
(34 institutions, including community colleges; 147,508 students)

Salary: $115,000
Benefits: Lives in house provided by system; receives $10,000 entertainment allowance; receives no car or foundation money.

HAWAII

Albert J. Simone
president,
University of Hawaii System
(9 institutions, including community colleges; 42,682 students)

Salary: $95,000
Benefits: University provides house, gardening services, and 1985 Oldsmobile Cutlass Supreme; state provides $15,000 annual university expense account, of which the president uses about $2,250 for travel and entertainment.

IDAHO

Richard D. Gibb
president,
University of Idaho
(1 campus; 8,641 students)

Salary: $67,442
Benefits: University provides house, Pontiac 6000 car, and membership dues in professional organizations.

ILLINOIS

Stanley O. Ikenberry
president
University of Illinois
(2 campuses; 60,036 students)

Salary: $115,400
Benefits: Lives in university house; drives 1986 Buick provided by foundation; uses foundation money to pay for entertainment and membership in country club and luncheon club; wife drives foundation-owned car for university-related activities.

INDIANA

John W. Ryan
president,
Indiana University System
(8 campuses; 80,116 students)

Salary: $125,000
Benefits: Lives in university-owned house; drives Buick provided by foundation; uses foundation money to pay for entertainment and club memberships; has restricted, state-financed expense account.

IOWA

James O. Freedman
president,
University of Iowa
(1 campus; 29,504 students)

Salary: $112,500
Benefits: Lives in state-owned house; drives Buick provided by foundation.

KANSAS

Gene A. Budig
chancellor,
University of Kansas
(3 campuses; 25,822 students)

Salary: $99,401
Benefits: Lives in university-owned house; drives 1985 Buick provided by foundation; uses foundation money for entertainment.

KENTUCKY

Donald C. Swain
president,
University of Louisville
(1 campus; 20,710 students)

Salary: $97,750
Benefits: Lives in university-owned house with housekeeper provided; drives Oldsmobile provided by university; uses foundation money for entertainment.

LOUISIANA

Allen A. Copping
president,
Louisiana State University System
(8 campuses; 54,748 students)

Salary: $115,000
Benefits: Lives in university-owned house that is being renovated with private money; drives Cadillac provided by university foundation; uses foundation money for entertaining.

MAINE

Robert L. Woodbury
chancellor,
University of Maine System
(7 campuses; 28,964 students)

Salary: $96,000
Benefits: System provides $12,000 annual housing allowance and Ford station wagon.

MARYLAND

John S. Toll
president,
University of Maryland
(5 campuses, 90,084 students)

Salary: $108,575
Benefits: Lives in state-owned house on main campus; drives state-owned 1986 Chevrolet Celebrity; has $16,000 annual expense account.

MASSACHUSETTS

Franklyn G. Jenifer
chancellor,
Board of Regents of Higher Education
(29 institutions, including community colleges; 184,428 students)

Salary: $65,000
Benefits: System provides $19,200 annual housing allowance and an Oldsmobile.

MICHIGAN

Harold T. Shapiro
president,
University of Michigan
(3 campuses; 48,192 students)

Salary: $127,000
Benefits: University provides house and Buick, but president must reimburse university $600 annually for personal use of car; wife allowed to travel at university expense when taking part in official activities.

MINNESOTA

Kenneth H. Keller
president,
University of Minnesota
(5 campuses; 79,475 students)

Salary: $125,000
Benefits: University provides house and Chrysler; foundation pays for entertainment expenses and membership in two luncheon clubs used for official business.

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[1] Salary and benefits are those provided the previous chancellor, Clifton R. Wharton, Jr. His replacement, who has not been named, may receive different salary and benefits.

[2] Salary and benefits are those provided the previous chancellor, J. A. Leone. His replacement, who has not been named, may receive different salary and benefits.

MISSISSIPPI

Donald W. Zacharias
president,
Mississippi State University
(1 campus; 11,474 students)

Salary: $78,000 plus $17,000 private supplement provided by foundation

Benefits: Lives in university-owned house; drives Oldsmobile provided by foundation; uses foundation money to supplement entertainment allowance.

MISSOURI

C. Peter Magrath
oresident,
University of Missouri
(4 campuses; 52,956 students)

Salary: $115,000

Benefits: Has house, caretaker, and Buick provided by university; has entertainment expenses and country-club membership paid for by private donations.

MONTANA

William J. Tietz
oresident,
Montana State University
1 campus; 10,233 students)

Salary: $73,250

Benefits: University provides house, housekeeper, and leased 1985 Plymouth; foundation pays entertainment expenses.

NEBRASKA

Ronald W. Roskens
oresident,
University of Nebraska
3 campuses; 39,938 students)

Salary: $93,000

Benefits: Lives in university-owned house; drives 1987 Buick leased by foundation; belongs to country club and luncheon club at university expense; has $18,000 expense account provided by foundation.

NEVADA

Mark H. Dawson
hancellor,
University of Nevada
2 university campuses and 4
ommunity colleges; 49,999 students)

Salary: $87,000

Benefits: Receives $16,000 annual housing allowance and $6,000 car allowance; has $5,000 annual expense account for entertaining.

NEW HAMPSHIRE

Claire A. Van Ummersen
hancellor,
University System of New Hampshire
2 university campuses and 2 state
olleges; 25,000 students)

Salary: $80,000

Benefits: System provides $15,000 annual housing allowance and Buick LeSabre.

NEW JERSEY

Edward J. Bloustein
resident,
Rutgers, the State University of New
ersey
3 campuses; 48,539 students)

Salary: $115,000

Benefits: System provides house and Oldsmobile; reimburses president for official business expenses.

NEW MEXICO

Gerald W. May
resident,
University of New Mexico
4 campuses plus 2 research
nstitutes; 28,000 students)

Salary: $90,000

Benefits: University provides house (which Mr. May uses for official functions but not as a residence) and 1987 Oldsmobile (for business purposes only), and pays membership dues for luncheon club; foundation provides a $10,000 expense account for official entertainment.

NEW YORK

Vacant[1]
hancellor,
tate University of New York
64 institutions; 363,048 students)

Salary: $89,250

Benefits: Former chancellor paid rent on a university-owned apartment and drove a 1982 state-owned Plymouth Fury.

NORTH CAROLINA

C. D. Spangler, Jr.
resident,
University of North Carolina
15 universities and 1 arts school;
29,880 students)

Salary: $112,300

Benefits: University provides house, including caretaker, and Ford car.

NORTH DAKOTA

Thomas J. Clifford
resident,
University of North Dakota
1 campus; 11,006 students)

Salary: $78,156

Benefits: University provides house and 1986 Buick; foundation pays for country-club membership.

OHIO

Edward H. Jennings
resident,
Ohio State University
5 campuses; 57,716 students)

Salary: $119,260

Benefits: University provides house, part-time caretakers, leased 1986 Buick LeSabre, and expense account for official travel and other expenses; foundation provides entertainment money to pay for official functions.

OKLAHOMA

Vacant[2]
hancellor,
Oklahoma State Regents for Higher
Education
27 institutions including 14 two-year

Salary: $93,506

Benefits: Foundation provides 1985 Mercury for official business; system provides $9,400 "maintenance-of-office allowance." No house or housing allowance provided.

OREGON

William E. Davis
chancellor,
State System of Higher Education
(8 institutions; 61,563 students)

Salary: $92,040

Benefits: System provides house, housekeeper, $7,800 expense account for entertaining, and Ford car.

PENNSYLVANIA

James H. McCormick
chancellor,
Pennsylvania State System of Higher
Education
(14 universities; 86,165 students)

Salary: $74,000

Benefits: System provides house and leased 1985 Pontiac 6000 and reimburses chancellor for official entertainment expenses; statewide alumni association pays for membership in luncheon club.

RHODE ISLAND

Edward D. Eddy
president,
University of Rhode Island
(1 campus; 14,482 students)

Salary: $84,000

Benefits: University provides house and 1984 Buick Century; foundation provides expense account.

SOUTH CAROLINA

James B. Holderman
president,
University of South Carolina
(9 campuses; 34,857 students)

Salary: $92,500

Benefits: University provides house, 1986 Buick Park Avenue, and membership in five dinner clubs; foundation pays for entertainment expenses.

SOUTH DAKOTA

Robert T. Wagner
president,
South Dakota State University
(1 campus; 6,765 students)

Salary: $71,400

Benefits: University provides house; foundation provides expense account for entertaining and other official business and pays for car maintenance.

TENNESSEE

Edward J. Boling
president,
University of Tennessee
(4 campuses; 39,955 students)

Salary: $105,000

Benefits: University provides house, 1984 Oldsmobile, and $17,000 expense account for official business.

TEXAS

Hans Mark
chancellor,
University of Texas System
(13 campuses; 121,000 students)

Salary: $61,800 state salary plus $92,700 supplement paid for by private donations

Benefits: System provides house and reimburses chancellor for entertainment and car expenses; private donations pay for other official expenses and membership dues at five luncheon and dinner clubs.

UTAH

Chase N. Peterson
president,
University of Utah
(1 campus; 24,721 students)

Salary: $99,567

Benefits: University provides housing allowance, theater tickets, 1985 Pontiac, and expense account; foundation pays for country-club membership, entertainment, and liquor consumed at official events; spouse gets free tuition.

VERMONT

Lattie F. Coor
president,
University of Vermont
(1 campus; 11,096 students)

Salary: $105,000

Benefits: University provides house and leased B.M.W.; reimburses president for official expenses.

VIRGINIA

William E. Lavery
president,
Virginia Polytechnic Institute
and State University
(1 campus; 22,345 students)

Salary: $85,721 plus $35,279 private supplement provided by foundation

Benefits: University provides house and up to $6,500 in expense money, which pays for up to $840 in membership dues at private dinner clubs.

WASHINGTON

William P. Gerberding
president,
University of Washington
(1 campus; 33,674 students)

Salary: $95,052 plus $33,168 supplement paid by private donations

Benefits: University provides house, part-time household help, and mileage reimbursement but no car; private donations pay for entertainment expenses.

WEST VIRGINIA

Neil S. Bucklew
president,
West Virginia University
(1 campus; 17,175 students)

Salary: $85,608

Benefits: University provides house, Oldsmobile, and office expense account; foundation provides money for official entertainment.

WISCONSIN

Kenneth A. Shaw
president,
University of Wisconsin System
(26 institutions; 164,518 students)

Salary: $104,876

Benefits: University provides house, $26,000 expense account, and Pontiac 6000 for official use only; foundation provides up to $12,000 for official entertainment.

WYOMING

Donald L. Veal[3]
president,
University of Wyoming

Salary: $87,480

Benefits: University provides house and Buick; foundation provides entertainment allowance.

In Some States, Perquisites May Produce a Political Backlash

Continued from Page 1

tant. "You want to pay the person enough to retain them, but you don't want to create a political backlash. There's a magic [salary] number that you only know after you've tried it."

In New York, the number has been too low for trustees who must recruit a new chancellor. In Maine, it was too high.

Mr. McCarthy's $78,000 chancellor's salary wasn't an issue when he left Maine last year. But when asked about his new salary, he simply says, "One of the advantages of working in the private sector is the privacy."

Packages Now More Generous

In recent years, combined salaries and benefits of chief executive officers in higher education have started to close ranks with those of executives in private industry, a new study shows. The study, *1986 Compensation and Benefits Survey of College and University Chief Executive Officers*, was done by private consultants for the Association of Governing Boards, the College and University Personnel Association, and the American Council on Education.

Benefit packages have become more common and more generous since the same survey was done in 1984, said Frank B. Manley, managing principal of Sibson & Company, Inc., who oversaw the study. A majority of chief executives are provided with homes, a valuable benefit not usually offered in other fields of employment, along with cars, entertainment allowances, and, more and more, club memberships, household help, and other perks.

Among the newest perks are so-called separation policies (agreements that give executives a paid transition period or allow them to teach after leaving their posts), which are offered by 18 per cent of the 1,429 institutions surveyed, and salary bonuses, which are more common at private institutions.

However, the study also shows that heads of public institutions earn significantly less than their counterparts at private institutions. While salaries for all higher-education chief executives rose an average 7.3 per cent in 1986, the average salary for the head of a large private research university was $153,400 annually, compared to $103,600 for the head of a large public research institution.

Not all taxpayers are convinced that heads of public institutions are at a disadvantage. Indeed, in many states top higher-education officials earn more than the governor.

Like the CUPA study, a *Chronicle* survey of benefits received by top public higher-education officials in all 50 states found that nearly all are provided with cars and homes or housing allowances. A majority of institutions said they used some form of private donations to help pay for official entertaining, club memberships, and, in a few cases, salary supplements for their chief executives.

Although the salaries and benefits of public higher-education officials differ depending on the size and scope of an institution, all are subject to public scrutiny and criticism when taxpayers' money is involved.

Consider:

► Robert A. Huttenback resigned last year as chancellor of the University of California at Santa Barbara amid an investigation into alleged misuse of university money to make improvements to his off-campus home. He and his wife, who maintain they did nothing improper because the home was used for business functions, were charged in March with embezzlement, insurance fraud, and tax evasion (*The Chronicle*, March 25). After a state audit last year found the couple had inappropriately used $174,000 in university funds to make home improvements, Mr. Huttenback repaid the university.

► The Coordinating Board of the Texas College and University System last fall ordered West Texas State University to repay $211,000 in state money in cost overruns in improvements made to the president's home. At a time when the financially strapped system was forced to cut its budget, the university spent almost twice as much as the $494,900 originally authorized by the board, officials said.

West Texas officials, meanwhile, are trying to settle the differences with the state. They say much of the dispute focuses on whether guest rooms for official visitors and other features are considered a public or private need. "If I had it to do over again, I'd look carefully at putting the guest rooms on another site," said West Texas President Ed Roach.

► Members of the Massachusetts Board of Regents of Higher Education last year were unable to persuade legislators to remove a $65,000 cap on the chancellor's salary, which some members said hampered their search for a new system head. Chancellor Franklyn G. Jenifer, former vice-chancellor of the New Jersey Department of Higher Education, accepted a pay cut to take the job.

Recently the regents hired a consulting firm to study the salaries of all top higher-education officials in the state. They hope to use the study to prompt legislators to raise salaries.

Sensitivity About Public Funds

Partly because of the public criticism some benefits have prompted and partly because of the severe financial problems that many states currently face, state higher-education officials and governing boards appear to be increasingly sensitive about how public money is spent, many officials say.

As a result, when higher-education officials ask for more public money, as they have for chancellors' salaries in New York and Massachusetts, they take great pains to justify why it is needed. SUNY trustees, for example, say they won't hire a new chancellor until the Legislature gives them authority to raise the salary, which it is expected to do this year.

Public institutions may also be more willing to provide perks that don't carry hefty price tags, or to use private donations to pay for certain activities that previously might have been financed by state money, say those familiar with higher-education compensation policies.

"What's happening as a trend in the public sector is that boards are looking for other creative and appropriate ways to supplement any state constraints on salaries," said Richard T. Ingram, executive vice-president of the Association of Governing Boards of Universities and Colleges.

For example:

► Mississippi State University couldn't use state money to match

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the salary that President Donald W. Zacharias was earning as president of Western Kentucky University, so it supplemented his new $78,000 state salary with $17,000 in privately raised money. Several other large public institutions follow the same practice.

► James V. Koch, who was appointed president of the University of Montana last year, negotiated a benefits package that gave him tenure to teach during or after his presidency. Mr. Koch, a former economics professor and administrator who took a salary cut to take the $73,000 job, said the unusual perk offered him both security and a chance to keep up with teaching while serving as president.

► E. Gordon Gee, president of the University of Colorado system, drives a Cadillac Seville donated by a local car dealer.

► Finance officials of the Louisiana State University System are using mostly private money to renovate the system-owned president's house. "There is nothing illegal or unethical about using state money to maintain property, but in these rough times we thought it would be better public policy to use private money," said William L. Silvia, Jr, the system's vice-president for administration and finance.

Large Constituencies to Serve

When asked to provide details of compensation packages, many university finance officials and governing board members were quick to defend their chief executives' salaries and benefits. Over and over, they made the point that a university or system head is comparable to the head of a large corporation but has a much larger constituency that includes legislators, faculty members, trustees, students, parents, and the public.

While not exactly on a scale with Chrysler Corporation Chairman Lee Iacocca (his total compensation last year was reportedly more than $20-million, including stock options), many higher-education executives still aren't compensated as well as they ought to be, some supporters say.

"One thing people don't think about is the complex nature of the corporation we call a university," said Craig S. Bazzani, vice-president of business and finance at the University of Illinois system. "We manage airports, residence halls, research institutes, hospitals, and other entities."

In an article published in the New York *Times* last fall, Donald Blinken, chairman of SUNY's Board of Trustees, described his institution as "Company X," with a $2-billion annual budget, 30,000 employees, and 370,000 customers—the students.

As for the presidents, they're not in it for the money.

Said Chase N. Peterson, president of the University of Utah: "If I was paid for the hours I put in, they ought to double the salary. But for the challenge and the excitement, the salary's fine."

Controversial Renovations

Renovations made to homes provided for chief executives have been especially controversial.

Officials at Virginia's Old Dominion University were criticized recently for spending $506,000—most of it state money—to renovate the president's residence. Among the features that attracted public attention were a new swimming pool and more than $10,000 worth of draperies, including balloon shades made by the trendy boutique chain Laura Ashley.

University officials have defended the renovation, saying it would boost fund-raising efforts and allow the president, who must live in the house, to entertain properly. But Peter F. Wehmann, a university spokesman, said later, "There was far more of an outcry than we ever expected," especially over the Laura Ashley shades.

Asked whether such a renovation was worth the negative publicity, Mr. Wehmann said, "With a long-term goal in mind, yes. I think the problem is, people equate all this with personal use. They need to understand that it's a quasi-public house."

In Illinois, the president of Northern Illinois University resigned last year amid questions about improvements made in the president's house. As a result, the Illinois General Assembly ordered the state Board of Higher Education to conduct a study of all housing for university heads. The study recommended stricter controls on the use of state money for renovations to presidents' homes.

Giving Up Any Private Life

However, the study also concluded that presidents' homes continued to play an integral role in a president's job, and thus were a legitimate state expense. In fiscal 1985-86, the study noted, heads of Illinois state universities played host at 391 events drawing 22,356 people at university-owned residences.

Like other news accounts of presidents' homes, a USA *Today* survey published last fall—complete with photos of a few especially palatial residences—put some higher-education officials on the defensive. "I think the average citizen doesn't realize that the house in many ways isn't a great benefit," said Paul B. Marion, Arkansas's director of Higher Education. "It's a campus social center. It doesn't do the president any good if the house is valued at, say, $1-million, since he's not building equity and doesn't get to sell it."

Besides, he added, "You give up all your private life to become president."

Many Political Risks

One benefit that many public higher-education executives might especially welcome is one that has no price tag—political stability. Because they have a lot of people to please, they run a much greater risk of becoming a political casualty than do their counterparts at private institutions.

"Being a university president is one of the toughest jobs around," says Aims C. McGuinness, Jr., assistant executive director for higher education of the Education Commission of the States. "There's a lot of risk and not always a life afterward."

Says Mr. McCarthy, the former Maine chancellor: "The most important thing about the job is the atmosphere in which you work—the relationship of the chancellor to the campus presidents, the trustees, and the state as a whole.

"The biggest difference between [heading] a public and private institution is that in the private sector, you start off with a group of advocates who support the institution.

"In the public sector, you start off with people who see themselves as a regulatory board. Only after time can you make them into advocates."

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Benefits and Outside Income Boost Presidents' Compensation

Continued from Page 1

executives prepared by Sibson & Company, Inc., a consulting firm.

"Presidents are paid less than their counterparts in the private sector," said Elaine El-Khawas, vice-president for research at the American Council on Education. "But if you want to use the image of the mayor of a small town of 30,000 for comparison, they're probably making a lot more."

Annual Performance Reviews

At the same time, college trustees are paying closer attention to how well presidents do their jobs. About two-thirds of the presidents said they received an annual performance review. In a similar survey in 1984, only 33 per cent said they received formal feedback every year.

Representatives of the three higher-education associations that sponsored the survey said the results demonstrated that colleges were by necessity becoming more creative in compensating their top employees.

Indeed, conditions of employment are now spelled out formally, often at the C.E.O.'s request. Three-quarters of the college presidents have contractual agreements, with 75 per cent of those in the form of written contracts or letters of agreement.

By comparison, only 44 per cent of chief executives in industry work under contract.

"Presidents are more savvy these days about their compensation packages," said Linda E. Henderson of the Association of Governing Boards of Universities and Colleges. "Colleges are having to come up with more attractive ways to get the kind of people they want."

Ms. Henderson said those ways included guaranteeing directorships and allowing a certain number of outside consulting days for a new president.

In addition, 16 per cent of the chief executives reported some other form of cash compensation from their own institutions. A little more than one-fourth said they received an annual bonus, at an average of $9,745.

Higher Pay at Private Colleges

According to the survey, the average chief executive is over 50, has been in the job for seven years or less, and probably came from an administrative position in another institution. Thirty-four per cent had been in the top spot for less than four years.

About 8 per cent of the C.E.O.'s surveyed were members of minority groups, and 9 per cent were women.

Presidents of private independent institutions make more than their counterparts at public institutions, the survey shows.

Following is a comparison of public and private salaries:

Chief executives' salaries, by type of institution

	Public	Private
Research	$94,600	$136,300
Other doctoral	93,700	97,500
Comprehensive	89,400	94,500
Baccalaureate	66,800	76,500
Two-year	64,700	96,000

Perquisites are more consistent, although two-year-college presidents fare worse than their colleagues at other institutions in that regard.

More than half of all C.E.O.'s have some provision for housing. Two-thirds of the presidents who live in a university-owned residence are provided with household staff members and allowances for remodeling.

Only 27 per cent of two-year-college leaders are provided with housing, however, compared to 93 per cent of those at public research universities.

The survey did indicate that more than half of the chief executives who are not living in a residence provided by their institution are given an allowance to purchase a home.

"Housing does make up a whale of a lot," said Frank B. Manley, managing principal of Sibson & Company. "But it's a two-edged sword. A president has had good living, but hasn't built up any equity during that time."

Special Retirement Accounts

As a result, Mr. Manley said, some institutions are putting away money in supplemental accounts from which presidents can withdraw when they retire.

Some 95 per cent of public-university presidents have some provisions for use of an automobile, while at two-year institutions only 68 per cent are either provided with or al-

FACT-FILE

Benefits and Compensation of College Presidents, 1985-86

Housing	
Residence provided	50%
Additional housing assistance:	
Maintenance	92%
Utilities	91%
Household staff	74%
Remodeling allowance	65%
Housing assistance where residence not provided	
Home-purchase allowance	57%
Mortgage-interest subsidy	17%
Property-tax allowance	5%
Property tax paid in full	3%
Rental allowance	26%
Rent paid in full	7%
Relocation assistance (for those who moved)	
Household moving expenses:	
Paid in full	76%
Paid in part	17%
Travel expenses for family:	
Paid in full	33%
Paid in part	11%
Assistance to spouse	
Staff and facilities for entertaining	80%
Secretarial staff as needed	26%
Remuneration for full-time involvement at institution	23%

Car	
Personal car provided	65%
Pool car:	
Assigned to chief executive	20%
Available as needed	6%
Operating expenses:	
Paid	57%
Allowance provided	11%
Option to purchase car	2%
Driver provided as needed	10%
Travel and entertainment expenses	
Reimbursement	84%
Separate travel allowance	14%
Per-diem allowance	21%
Unrestricted expense account	9%
Reimbursement for spouse's expenses	24%
Airline V.I.P. club	8%
First-class air travel	4%
Use of institution's plane	4%
Entertainment expenses	
Reimbursement	68%
Fixed allowance	31%
Unrestricted expense account	12%
Use of campus facilities	67%
Use of institution staff	60%

Employment contracts	75%
Membership in clubs or associations	
Professional associations, societies	86%
Luncheon club	37%
Country club	25%
Other private club	23%
Health club	3%
Retirement assistance (percentage of salary)	
Institution's contribution to basic plan	
None	14%
Some, but less than 5%	3%
5% to 9%	37%
10% to 14%	30%
15% to 19%	8%
20% and above	8%
Contributions required of president	
None	39%
Some, but less than 5%	10%
5% to 9%	45%
10% to 14%	2%
15% to 19%	1%
20% and above	3%

Average Salaries by Type of Institution and Full-Time-Equivalent Enrollment

	Number of institutions	Average salary of chief executive
RESEARCH UNIVERSITIES		
Public		
Fewer than 9,000	18	$78,600
9,000 to 14,999	7	96,000
15,000 and over	31	103,600
Total	**56**	**$94,600**
Private, independent		
Fewer than 10,000	9	$122,900
10,000 and over	7	153,400
Total	**16**	**$136,300**
OTHER DOCTORAL-GRANTING UNIVERSITIES		
Public		
Fewer than 10,000	14	$98,100
10,000 and over	15	89,600
Total	**29**	**$93,700**
Private, independent		
Fewer than 3,000	8	$83,500
3,500 and over	6	111,300
Total	**14**	**$97,500**
COMPREHENSIVE UNIVERSITIES		
Public		
Fewer than 2,000	9	$73,200
2,000 to 3,999	19	75,900
4,000 to 4,999	17	76,200
5,000 to 7,999	29	75,200
8,000 to 14,999	46	86,700
15,000 and over	25	98,900
Total	**145**	**$89,400**
Private, independent		
Fewer than 2,000	14	$79,800
2,000 to 3,999	16	88,500
Private, independent—Continued		
4,000 and over	12	119,900
Total	**42**	**$94,500**
Private, church-related		
Fewer than 2,500	7	$70,600
2,500 to 3,499	8	81,100
3,500 and over	7	74,400
Total	**22**	**$75,600**
BACCALAUREATE COLLEGES		
Public		
Fewer than 1,000	10	$59,900
1,000 to 1,999	17	65,200
2,000 to 2,999	16	68,900
3,000 to 3,999	17	65,300
4,000 and over	17	71,800
Total	**77**	**$66,800**
Private, independent		
Fewer than 500	30	$53,900
500 to 999	38	73,000
1,000 to 1,499	31	78,600
1,500 to 1,999	24	86,800
2,000 and over	27	95,100
Total	**150**	**$76,500**
Private, church-related		
Fewer than 500	34	$42,600
500 to 749	26	55,600
750 to 999	39	62,100
1,000 to 1,499	45	64,800
1,500 and over	37	80,800
Total	**181**	**$62,000**
SPECIALIZED INSTITUTIONS		
Public		
Fewer than 3,000	10	$96,800
3,000 and over	6	81,500
Total	**16**	**$91,700**
Private, independent		
Fewer than 500	12	$47,300
500 to 999	10	63,900
1,000 and over	10	76,200
Total	**32**	**$62,700**
Private, church-related		
Total	**12**	**$49,500**
TWO-YEAR COLLEGES		
Public		
Fewer than 500	92	$55,800
500 to 999	114	60,500
1,000 to 1,999	69	66,300
2,000 to 2,999	41	65,400
3,000 to 4,999	22	65,100
5,000 to 9,999	55	72,700
10,000 and over	50	78,600
Total	**443**	**$64,700**
Private, independent		
Fewer than 399	12	$70,900
400 to 599	9	87,400
600 to 999	13	101,600
1,000 and over	12	125,000
Total	**46**	**$96,000**
Private, church-related		
Fewer than 200	13	$46,300
200 and over	10	50,500
Total	**23**	**$48,200**

Note: Figures are based on the reports of 1,429 colleges and universities.

SOURCES: AMERICAN COUNCIL ON EDUCATION
ASSOCIATION OF GOVERNING BOARDS OF UNIVERSITIES AND COLLEGES
AND COLLEGE AND UNIVERSITY PERSONNEL ASSOCIATION

owed the use of a car, the survey howed.

Among other benefits and perquites described in the survey:

► About 12 per cent of colleges nd universities give their chief exective an unrestricted expense acount for entertainment. More than vo-thirds require a president to put for reimbursement.

► About 80 per cent of institutions ffer assistance to their presidents' pouses for the purposes of enterining. Just over one-fourth offer ecretarial help, and 23 per cent pay e spouse for his or her involvement university affairs.

► About 86 per cent of the chief xecutives have paid memberships in rofessional societies, with 25 per ent provided with country-club emberships.

► Presidents are allowed sabbatial leaves at 28 per cent of the sureyed colleges and universities. hey are allowed leaves of absence r personal or medical reasons at 71 er cent of the institutions, up from 7 per cent reported in the 1984 surey.

The study was sponsored by the ollege and University Personnel ssociation in conjunction with the C.E. and A.G.B.

Participants can order their first opy of the report, *The 1986 Comensation and Benefits Survey of ollege and University Chief Execue Officers*, for $75 ($25 for each dditional copy) from the order desk, UPA, Suite 120, 11 Dupont Circle, ashington 20036. For non-particiants, the cost is $125 for the first opy and $75 for each additional opy.

Professor's Lawsuit gainst Howard U. s Reinstated

WASHINGTON

A Howard University professor, ho was fired for refusing to teach a ass after a student called him a rac, has had his lawsuit against the niversity reinstated.

Alan McConnell, an associate prossor of mathematics, was disissed after he said he would not rern to the class until the university d something about a student who lled him a "patronizing racist."

"He either wanted her to apoloze, or be transferred out of the ass," said Mr. McConnell's lawer, Gary H. Simpson. "The univerty did nothing about the student— stead, it fired him."

Mr. McConnell, who had tenure, ed the university, seeking reinatement to his job. That suit was rown out by a federal district judge, t last week, the U.S. Court of Apals for the District of Columbia restated it.

The court ruled that Mr. McConll should be given a chance to ove the university had no cause to e him, or that it did not follow corct procedures.

"The termination of a tenured facty member's appointment is a seris matter," the ruling said.

According to the lawsuit, a black udent in Mr. McConnell's methodogy class accused him of being a cist and then refused to retract the mark. Mr. McConnell, who is hite, said that statement had comomised his "moral authority" to ach.

University administrators would t comment on the latest decision, cept to say they were disappoint-

New Books on Higher Education

It may be necessary to add state tax to the cost of books listed below. Discounts may be available to scholars and to people who order in bulk.

Academic Freedom and Catholic Higher Education, by James John Annarelli (Greenwood Press, 88 Post Road West, Westport, Conn. 06881; 248 pages; $35 prepaid). Analyzes Catholic and secular models of academic freedom; suggests how the latter approach can be adapted to the needs of religiously committed institutions.

Challenges for Continuing Higher Education Leadership: Corporate/Campus Collaboration (National University Continuing Education Association, One Dupont Circle, Suite 420, Washington 20036; 29 pages; $2.50 prepaid for NUCEA members, $4 prepaid for non-members). Considers how industry and higher education can cooperate to keep pace with technological change.

The College, the Constitution, and the Consumer Student: Implications for Policy and Practice, by Robert M. Hendrickson and Annette Gibbs (Association for the Study of Higher Education, One Dupont Circle, Suite 630, Washington 20036; 93 pages; $7.50 prepaid for members of A.S.H.E., the American Association for Higher Education, the American Educational Research Association, and the Association for Institutional Research; $10 prepaid for non-members). Discusses such topics as the rights of student organizations and the collection and allocation of mandatory student-activity fees.

Directory of Faculty Contracts and Bargaining Agents in Institutions of Higher Education, Volume 13, January 1987, by Joel M. Douglas, Stephen H. Bryan, and Elisabeth A. Kotch (National Center for the Study of Collective Bargaining in Higher Education and the Professions, Bernard Baruch College, City University of New York, 17 Lexington Avenue, Box 322, New York 10010; 150 pages; $20 prepaid). Provides data on faculty bargaining agents and contracts.

Expanding Opportunities for Professional Education (New Directions for Student Services No. 37), edited by Leila V. Moore and Robert B. Young (Jossey-Bass Publishers, 433 California Street, San Francisco 94104; 83 pages; $11.95 prepaid). Contains essays on professional education for student-services administrators.

How to Save Our Catholic Colleges: A Guide for Trustees, Administrators, Alumni, and Religious Orders: A Report of: The Fiscal and Personnel Resources of Catholic Colleges Founded by Women Religious, 1973-74 to 1989-90, by Richard W. Waring (Richard W. Waring, 845 Heathermoor Lane, Perrysburg, Ohio 43551; 70 pages; $15 prepaid).

The Master's Degree: Jack of All Trades, edited by Joslyn L. Green (State Higher Education Executive Officers, 1860 Lincoln Street, Suite 310, Denver 80295; 66 pages; $10 prepaid). Contains essays that examine the quality and value of today's master's degrees.

Presidential Housing and Tax Reform: A Guide for Chief Executives, by Robert H. Wellen and Howard L. Clemons (American Association of State Colleges and Universities/National Association of College and University Attorneys; available from NACUA, One Dupont Circle, Suite 620, Washington 20036; 27 pages; $6.50 prepaid). A guide for college and university presidents and chancellors; describes Internal Revenue Service rules for excluding the value of college-provided housing from taxable income.

Strengthening Teacher Education: The Challenges to College and University Leaders, by C. Peter Magrath, Robert L. Egbert, and Associates (Jossey-Bass Publishers, 433 California Street, San Francisco 94104; 208 pages; $21.95 prepaid).

Survey of Accreditation Issues, 1986, Higher Education Panel Report No. 74, by Charles J. Andersen (American Council on Education, Division of Policy Analysis and Research, One Dupont Circle, Washington 20036; 26 pages; $5 prepaid for A.C.E. members, $8 prepaid for non-members). Reports on a survey of college and university presidents, academic vice-presidents, deans, and other officials.

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FACT–FILE

Voluntary Support of Higher Education, 1985-86

Public Institutions

	94 doctoral institutions	129 comprehensive institutions	42 general baccalaureate institutions	22 specialized institutions	287 4-year institutions	151 2-year institutions	Total for 438 institutions
PURPOSES OF SUPPORT							
Current operations							
Unrestricted	$ 92 556,000	$ 25,158,000	$ 4,107,000	$ 8,739,000	$ 130,560,000	$ 5,226,000	$ 135,786,000
Restricted	1,014,921,000	94,794,000	14,637,000	103,157,000	1,227,510,000	16,379,000	1,243,889,000
Capital	253,005,000	37,925,000	2,319,000	33,108,000	326,357,000	10,633,000	336,990,000
Endowment							
Unrestricted	15,110,000	3,792,000	1,470,000	3,760,000	24,132,000	385,000	24,516,000
Restricted	317,563,000	38,007,000	8,753,000	20,356,000	384,679,000	4,597,000	389,276,000
Loan funds	8,929,000	597,000	7,000	742,000	10,276,000	109,000	10,385,000
SOURCES OF SUPPORT							
Alumni	$ 356,179,000	$ 31,496,000	$ 6,640,000	$ 15,106,000	$ 409,421,000	$ 672,000	$ 410,093,000
Parents	2,949,000	1,600,000	156,000	28,000	4,733,000	988,000	5,721,000
Other individuals	314,069,000	55,752,000	10,752,000	39,594,000	420,165,000	10,137,000	430,302,000
Foundations	229,298,000	33,451,000	5,713,000	48,581,000	317,042,000	4,857,000	321,900,000
Corporations and businesses	593,191,000	65,348,000	6,909,000	48,726,000	714,175,000	16,393,000	730,568,000
Religious organizations	573,000	339,000	25,000	24,000	962,000	39,000	1,001,000
Other organizations	205,827,000	12,288,000	1,098,000	17,804,000	237,016,000	4,242,000	241,258,000
FORMS OF GIVING							
Realized bequests							
For current operations	$ 32,624,000	$ 2,584,000	$ 542,000	$ 6,697,000	$ 42,448,000	$ 469,000	$ 42,917,000
For capital assets	77,048,000	11,451,000	2,748,000	1,706,000	92,953,000	507,000	93,460,000
Trusts, pooled income funds, and annuities	39,555,000	1,614,000	1,324,000	1,552,000	44,045,000	677,000	44,722,000
SUPPORT THROUGH THE ANNUAL FUND							
Total alumni of record	9,076,027	3,318,439	325,892	163,083	12,883,441	427,159	13,310,600
Alumni solicited	5,895,436	2,299,363	219,692	143,229	8,557,720	223,457	8,781,177
Alumni donors	1,205,943	330,987	46,803	31,327	1,615,060	33,135	1,648,195
GIFTS OF PROPERTY							
Company products	$ 69,463,000	$ 16,575,000	$ 457,000	$ 9,677,000	$ 96,171,000	$ 5,391,000	$ 101,562,000
Other, corporations	30,003,000	8,529,000	305,000	1,346,000	40,184,000	1,544,000	41,728,000
Other, non-corporations	104,267,000	9,174,000	519,000	1,057,000	115,017,000	1,018,000	116,035,000
CORPORATIONS' MATCHING GIFTS							
Total number of gifts matched	99,220	12,691	1,472	4,524	117,907	574	118,481
Support from matching-gift programs	$ 26,960,000	$ 2,879,000	$ 536,000	$ 1,504,000	$ 31,879,000	$ 263,000	$ 32,143,000
TOTAL SUPPORT	**$1,702,084,000**	**$200,273,000**	**$31,294,000**	**$169,863,000**	**$2,103,514,000**	**$37,328,000**	**$2,140,842,000**

Private Institutions

	54 doctoral institutions	134 comprehensive institutions	407 general baccalaureate institutions	122 specialized institutions	717 4-year institutions	39 2-year institutions	Total for 756 institutions
PURPOSES OF SUPPORT							
Current operations							
Unrestricted	$ 255,750,000	$157,520,000	$371,114,000	$ 85,759,000	$ 870,141,000	$11,262,000	$ 881,404,000
Restricted	836,963,000	110,060,000	147,841,000	73,615,000	1,168,519,000	2,777,000	1,171,296,000
Capital	331,879,000	139,283,000	202,595,000	43,486,000	717,243,000	5,530,000	722,773,000
Endowment							
Unrestricted	98,545,000	50,289,000	107,546,000	35,599,000	291,979,000	2,047,000	294,026,000
Restricted	648,106,000	154,750,000	252,996,000	41,839,000	1,097,693,000	5,601,000	1,103,294,000
Loan funds	7,154,000	2,054,000	6,233,000	2,555,000	17,996,000	56,000	18,052,000
SOURCES OF SUPPORT							
Alumni	$ 581,383,000	$166,134,000	$353,346,000	$ 39,580,000	$1,140,443,000	$ 5,105,000	$1,145,548,000
Parents	19,550,000	13,964,000	30,326,000	1,963,000	65,824,000	472,000	66,296,000
Other individuals	434,937,000	188,848,000	302,465,000	80,650,000	1,006,900,000	9,609,000	1,016,509,000
Foundations	528,014,000	92,317,000	167,905,000	67,077,000	855,313,000	2,057,000	857,371,000
Corporations and businesses	486,141,000	91,755,000	107,469,000	37,355,000	722,720,000	2,757,000	725,477,000
Religious organizations	9,504,000	36,332,000	85,665,000	41,522,000	173,022,000	6,248,000	179,270,000
Other organizations	118,887,000	24,626,000	41,151,000	14,686,000	199,351,000	1,024,000	200,375,000
FORMS OF GIVING							
Realized bequests							
For current operations	$ 75,109,000	$ 26,332,000	$ 32,883,000	$ 14,970,000	$ 149,294,000	$ 269,000	$ 149,563,000
For capital assets	193,498,000	83,306,000	136,553,000	13,494,000	426,851,000	1,292,000	428,142,000
Trusts, pooled income funds, and annuities	85,867,000	27,072,000	73,859,000	12,255,000	199,054,000	807,000	199,861,000
SUPPORT THROUGH THE ANNUAL FUND							
Total alumni of record	3,411,287	2,707,645	3,771,057	770,648	10,660,637	206,618	10,867,255
Alumni solicited	2,550,162	2,222,228	3,140,224	658,995	8,571,609	170,131	8,741,740
Alumni donors	900,301	550,038	1,005,321	157,392	2,613,052	27,975	2,641,027
GIFTS OF PROPERTY							
Company products	$ 105,115,000	$ 12,039,000	$ 5,621,000	$ 6,985,000	$ 129,760,000	$ 44,000	$ 129,804,000
Other, corporations	2,954,000	5,035,000	3,531,000	551,000	12,071,000	143,000	12,214,000
Other, non-corporations	26,006,000	24,982,000	23,315,000	2,188,000	76,491,000	385,000	76,876,000
CORPORATIONS' MATCHING GIFTS							
Total number of gifts matched	108,069,000	47,407,000	83,068,000	18,691,000	257,235,000	1,055,000	258,890,000
Support from matching-gift programs	$ 34,604,000	$ 14,655,000	$ 27,406,000	$ 5,362,000	$ 82,027,000	$ 446,000	$ 82,473,000
TOTAL SUPPORT	**$2,178,416,000**	**$613,976,000**	**$1,088,327,000**	**$282,853,000**	**$4,163,573,000**	**$27,273,000**	**$4,190,845,000**

Sources of Support

			Percentage increase	
Sources	1985-86[1]	Per cent	1-year	5-year
Alumni/alumnae	$1,825	24.7%	+25.0%	+ 74.0%
Other individuals	$1,781	24.1%	+25.8%	+ 76.9%
Corporations	$1,702	23.0%	+ 8.1%	+118.8%
Foundations	$1,363[2]	18.4%	+16.0%	+ 47.8%
Religious organizations	$ 211	2.8%	+ 1.4%	+ 50.7%
Other	$ 518	7.0%	+ 6.4%	+ 55.1%
Total	**$7,400**	**100.0%**	**+17.1%**	**+74.9%**
Price Indices				
Consumer Price Index			+ 2.4%	+ 25.0%
Higher Education Price Index			+ 4.4%	+ 37.4%

[1] Millions of dollars, estimate

[2] Includes gift of $100 million from the Danforth Foundation to Washington University

Trends in Giving

		Per student	
Academic years	Total	Current	Adjusted†
1970-71	$1,860,000,000	$217	$163
1975-76	2,410,000,000	215	130
1980-81	4,230,000,000	350	135
1984-85	6,320,000,000	516	163
1985-86	7,400,000,000	604	186
Average annual change			
1970-71 to 1975-76	+ 5.3%	− 0.2%	− 6.6%
1975-76 to 1980-81	+11.9%	+10.2%	+ 0.8%
1980-81 to 1985-86	+11.8%	+11.5%	+ 6.6%
1984-85 to 1985-86	+17.1%	+17.1%	+14.1%

† Adjusted to 1967 dollars, according to Consumer Price Index.

SOURCE: COUNCIL FOR FINANCIAL AID TO EDUCATION

Individuals Push College Giving to $7.4-Billion

Continued from Page 1

better the job you do in involving people of wealth in the life of your institution, the more money you're going to raise. A 25-per-cent increase in giving is not something done with mirrors."

The average gift from an alumnus or alumna was $331 last year, up from $265 the year before.

The rise in gifts from individuals more than made up for a fall in the growth rate of corporate contributions.

As had been expected, the C.F.A.E. survey found a marked slowdown in the growth of corporate contributions to higher education, which were up only 8 per cent last year, when companies gave $1.7-billion to colleges. Such gifts had increased 25 per cent the year before.

Increases in 6 Categories

Giving was up in all six donor categories in the C.F.A.E. survey.

Grants made by private foundations grew 16 per cent, to $1.36-billion, and giving by religious organizations grew 1.4 per cent, to $211-million. Gifts from other sources—including clubs, unions, and fund-raising consortia—totaled $518-million, a 6.4-per-cent increase.

A single foundation grant accounted for nearly 9 per cent of the estimated increase in total support—a $100-million grant from the Danforth Foundation to Washington University in St. Louis. However, the C.F.A.E. pointed out that the increase in total giving would have still been "an impressive" 15.5 per cent even without the Danforth grant.

The C.F.A.E. attributed the sharp rise in giving by individuals in part to the growing number and the ambitious goals of major institutional fund-raising campaigns, and the effectiveness of colleges in making their case for support.

Campaigns by 133 Institutions

An informal and unofficial tabulation by Brakeley, John Price Jones, Inc., a fund-raising consulting company, found that 133 colleges and universities were conducting or are about to begin capital campaigns with goals of at least $15-million. The total amount being sought by all of the campaigns that the company identified in its survey was $15.1-billion.

"I don't think this is a short-term phenomenon—I think that the number and the amount of money involved in capital campaigns are going to show substantial increases for the next couple of years," said Hayden W. Smith, senior vice-president of the C.F.A.E. "Consequently, we will see giving by individuals hang in at a pretty high number."

In addition to the rise in total giving by individuals, Mr. Smith said participants in the survey reported substantial increases in the numbers of their alumni donors both above and below the $5,000 level.

A strong stock market was another factor cited by the C.F.A.E. as helping to stimulate giving by individuals. The performance of stocks and bonds also helped account for the increase in giving by foundations, which are required by law to make grant payments worth a total at least equal to 5 per cent of their assets.

tax treatment of charitable contributions, might have decided to go ahead and make gifts before the end of the last academic year that they had been planning to make later.

Many colleges and universities have reported record totals of private gifts received late last year, following passage of the new tax law. The C.F.A.E. survey, however, included only gifts made before June 30, 1986.

Over the past five years, according to the C.F.A.E.'s national estimates, total private support for higher education grew by nearly 75 per cent and more than tripled since 1974-75, the last year in which there was a decline n dollars contributed.

The 17-per-cent increase in total support last year was far ahead of nflation, which the Consumer Price Index measured at 2.4 per cent and he Higher Education Price Index set at 4.4 per cent. The latter index is a measure of the prices colleges and universities pay for goods and serv-ces.

7 Pct. of Total Spending

Last year, gifts from private sources amounted to 7 per cent of the total $105.4-billion in college and university expenditures.

Stanford University, which last year was in the preliminary stages of a campaign to raise $1.1-billion by 991, led all institutions in voluntary support, with gifts totaling $179.26-million.

Harvard University, which had been the leader in previous years, raised $146.15-million and ranked second.

Washington University, which has raised more than $500-million over he past four years in a record-setting capital campaign, moved from the 20th position to third place in the rankings.

The C.F.A.E. reported the following 25 institutions had the highest totals in voluntary support last year:

Leaders in voluntary support

1. Stanford U.	$179,262,585
2. Harvard U.	146,152,722
3. Washington U.	146,132,062
4. Cornell U.	114,234,238
5. Yale U.	110,159,827
6. Columbia U.	94,488,962
7. U. of Minnesota	93,683,523
8. Princeton U.	87,522,746
9. U. of Illinois	82,893,571
10. U. of Pennsylvania	79,499,052
11. Cal. Inst. of Tech.	77,604,692
12. U. of Wis. at Madison	72,929,753
13. U. of Southern Cal.	72,058,401
14. Mass. Inst. of Tech.	71,490,693
15. U. of Washington	64,477,309
16. Duke U.	64,077,083
17. Texas A&M U.	62,159,709
18. Johns Hopkins U.	60,133,878
19. U. of Chicago	59,046,801
20. U. of Cal. at Los Angeles	57,200,685
21. U. of Michigan	57,143,238
22. U. of Texas at Austin	56,841,447
23. U. of Cal. at Berkeley	52,284,362
24. Ohio State U.	50,394,062
25. Northwestern U.	49,326,502
Systems not included above:	
U. of California	$204,801,078
U. of Texas	148,263,533

The slowdown in the growth rate of corporate contributions follows six years of double-digit increases in company giving to higher education.

"Such a pattern of increases is hard to sustain given continued sluggishness of corporate profits and the impact on contributions budgets of mergers, acquisitions, and restructuring," said Mr. Haire.

In their reports last fall on company giving in 1985, both the C.F.A.E. and the Conference Board, a business research organization, predicted that corporate giving in 1986 was likely to show no growth or a decline when final figures were in. Last week, Mr. Smith said it was now his guess that company giving in 1986 would show "some slight increase."

"It would have to show a significant decline in the second half of 1986 to offset the 8-per-cent increase in the first half of the year," he said. "My best estimate is that that is not going to happen."

The national estimates for giving to higher education are projections based on data that the C.F.A.E. received from 1,194 colleges and universities responding to its survey. Those institutions, the council said, account for about 85 per cent of all private giving to higher education.

The 148 doctorate-granting universities raised $3.88-billion, or 61.3 per cent of the support received by all participants in the survey.

The 54 private universities received an average $40-million each, an increase of 26 per cent over the previous year, and the 94 public universities averaged $18-million each, an increase of 18.7 per cent.

More Given to Public Colleges

Last year for the first time, corporations gave more money to public institutions than they gave to private colleges and universities. The C.F.A.E. said that was a continuation of a trend that had begun 15 years ago, when private institutions received two-thirds of all corporate contributions.

The C.F.A.E., a non-profit organization financed by corporate grants, monitors and seeks to encourage voluntary support for education. Its annual survey is also sponsored by the Council for Advancement and Support of Education and the National Association of Independent Schools.

The report on the latest survey, *Voluntary Support of Education 1985-86*, will be published in June. Copies, at $25 each prepaid, may be obtained from the Council for Financial Aid to Education, 680 Fifth Avenue, New York 10019.

Colleges Get More Aggressive in Quest for Major Gifts

Continued from Page 39

we depend heavily on individual giving for support."

It therefore wasn't surprising, he said, that individuals gave $277-million of the $410-million that the university raised in a four-year campaign that ended last year.

"The pressure by the federal government to put more emphasis on support from the private sector has had the effect of making things such as higher education seem more important to individuals," he said. "That, combined with a reasonably healthy stock market, has made a good climate in which to make our case to individuals."

Improvement in the ability of colleges to make their case was seen as a major contributor to the rise in private giving.

"Fund raisers are seeing that individual donors aren't that much different from foundations and corporations—if we want their support, we've got to show them who we are, what we do well, and how we do it," said Colette M. Murray, vice-president for development and alumni at the University of Louisville.

"They want to know what our priorities are, how they fit in with our mission, and who we are trying to serve. They want their money to go to a program where they know it will make a difference."

Keeping People Involved

The University of Louisville next month will complete a capital campaign that already has brought in $47-million; the $40-million goal was passed last fall. Gifts to the annual fund were not counted in the total, but there has been a 20-per-cent increase in such giving in each of the past two years, said Ms. Murray.

"Our challenge now is to keep those people involved," she added.

Keeping individuals involved in the institution is the key to sustained support, said Richard A. Edwards, vice-president for educational fund raising at the Council for Advancement and Support of Education.

"Besides doing a better job of making their case, colleges are also doing a better job of involving major donors in the life of the institution," he said. "The totals for giving last year show this—as institutions build relationships with individual supporters, their gift income goes up."

Mr. Edwards said the rise in individual giving might help allay some of the concern about competition for voluntary support among colleges, particularly between private and public institutions.

"Each institution has its own constituency," he said, "and that is where it is always going to find the bulk of its support."

—PAUL DESRUISSEAUX

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ONLY THE FOLLOWING PAGES OF THIS

PUBLICATION HAVE BEEN FILMED

Cov. 1, pgs. 19, 20, 25, 27,

28, 35

5/21/87 C 2175-1

THE CHRONICLE
of Higher Education.

ISSN 0009-5982

May 20, 1987 • $1.95
Volume XXXIII Number 36

News Summary

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College endowments rose by an average of 26.9 per cent in 1985-86. Story and Fact-File on Pages 25-28.

As a physician at a Berkeley student clinic, David Lyman brings humor and gentleness, as well as medical skill, to his job. Story on Page 3.

Computer scientists are developing "intelligent tutors," electronic teaching assistants that can track students' learning. Story on Page 6.

An engineer at Lehigh University thinks the construction industry should do more research before the building begins. Story on Page 6.

Public historians seem to have shaken their "second class" image. Story on Page 13.

Intense lobbying helped persuade the Senate to boost spending for education. Story on Page 18.

The former chancellor of the Oklahoma State Regents for Higher Education has been indicted by a county grand jury. Story on Page 18.

Colorado's Governor has vetoed a bill that would have abolished the tenure system at some of the state's colleges. Story on Page 21.

Wheaton College has been beset by controversy over its decision to admit men for the first time. Story on Page 30.

Members of the N.C.A.A. will vote next month on 43 proposals to cut the costs of college sports. Story on Page 35.

Education reformers in Japan are turning their attention to academic laxness and elitism at the country's universities. Story on Page 37.

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OUT OF UNIVERSITIES' SHADOW

2-Year Colleges Lobbying Aggressively for Added State Money and Programs

By **SCOTT JASCHIK**

Two-year public colleges, long overshadowed in state capitols by research universities and four-year colleges, are becoming much more aggressive about lobbying for funds and legislation that affect their institutions.

In dozens of states, officials of two-year colleges are trying to change legislators' perceptions of their institutions. Riding the wave of political interest in job-training programs and economic development, the colleges are making special efforts to tell legislators about the new students and companies they are serving. And they are demanding increased state support to continue their work.

More and more, they are lobbying the entire legislature, rather than appealing to a small part of it. In the past, community colleges generally operated as individual institutions and relied on the representatives from their own districts, but now more of the colleges are banding together and lobbying as a state system.

"Up until two or three years ago, we suffered from the 'forgotten child' syndrome," says Elwood Shoemaker, executive director of the Pennsylvania Commission for Community Colleges. "Now we are focusing on the role of community colleges in improving the economic situation of the state. That gets their attention, and we've been successful."

Says Louis W. Bender, professor of higher education at Florida State University and an expert on state support of community colleges, "They've seen that if they don't communicate more with the legislators, they're going to be left out."

State appropriations for community colleges appear in tables on Page 20.

The new lobbying activities take a variety of forms:

- In Pennsylvania, Mr. Shoemaker's organization has designated one of its staff members as an official lobbyist, the first time that the state's community colleges have had such a representative in Harrisburg.
- In Ohio, trustees of community colleges are forming an association to press government officials for more state support.
- In Oregon, community-college lead-

Continued on Page 19, Column 4

Canada's Faculty Unit Drops Bargaining, Cuts National Office

By **MARK GERSON**

OTTAWA

Canada's national association of university professors and librarians has adopted a "blueprint for survival" that will strip it of its collective-bargaining activities, slash membership dues by one-third, and cut staff members in its central office.

The decision to shrink and restructure the Canadian Association of University Teachers was taken at the group's annual meeting this month. It is expected to stem a wave of discontent that was threatening to break up the 26,000-member organization.

Not all member groups were happy with the changes, however. "We may have some sort of national organization when we're through," said Bryan Emerson, treasurer of the St. Mary's University Faculty Association, "but I'm not sure it will be anything more than a tombstone."

According to Allan R. Sharp, president of the national association, the C.A.U.T.

Continued on Page 39, Column 1

Scholars Conducting Research Abroad Are Hit Hard by High Costs Resulting from the Dollar's Decline

By **KIM McDONALD**

The fall of the U.S. dollar has sharply increased the cost of doing research abroad, forcing many American scholars who depend on grants and other fixed sources of support to reduce substantially or delay their research activities.

The situation is particularly acute for those whose research requires extended stays in Europe or Japan, where the dollar has fallen precipitously.

In Japan, where the dollar buys about half of what it did three years ago, scholars are stunned by what they must pay just to eat and sleep.

Prices for a moderate hotel room in Tokyo—"something comparable to a Holiday Inn"—average $180 a day, said Alan W. Milsap, who oversees a program at the National Science Foundation that supports about 20 U.S.-Japanese cooperative projects each year.

For those who must stay for longer periods with their families, he said, "renting an apartment has just become truly prohibitive."

Tokyo Apartment: $9,000 a Month

A two-bedroom, Western-style apartment in Tokyo that rented for about $5,000 a month three years ago now goes for about $9,000 a month, he said. A small glass of orange juice, which cost him $3 in September 1985, when he last visited Tokyo, now could cost as much as $6.

While the State Department has increased the maximum per-diem allowance for someone working at government expense in Tokyo from $130 last year to $204

Continued on Page 16, Column 1

Administration Bars Science-Agency Aid to Vienna Institute

Backers of East-West forum to seek Congressional support

By **COLLEEN CORDES**

WASHINGTON

The National Security Council has barred the National Science Foundation from providing a $500,000 grant to help finance American participation in research at a Vienna-based institute that brings together scientists from the East and West.

As a result, the institute's supporters are seeking money directly from Congress.

Some scientists say the rejection of the grant indicates that the Administration is reluctant to participate in joint research with Communist countries when the federal government cannot directly control it. Administration officials, they add, do not seem to trust American scientists to participate in East-West research if the U.S. government is not involved in the arrangement.

The episode began when the American Academy of Arts and Sciences applied late in 1985 for the grant, which would have gone to the International Institute for Applied Systems Analysis in Austria.

The academy is one of the official U.S. members of the institute, which brings together scientists from the East and West to

Continued on Page 24, Column 1

HAPPY GRADUATE

WIDE WORLD

A woman at North Carolina Central U. jubilantly signals her parents. For the views of 17 seniors on their college experiences, see Page 30.

such a large increase this time? That would have put them in the uncomfortable position of voting "against education," and they would probably have been unhappy with education officials for forcing them to do so.

After considering the issues, Mr. Hollings and education officials decided they would stick to their demand.

'Stealing' from Child Welfare?

In the meantime, Senator Chiles's aides told the Children's Defense Fund, a group that lobbies for better care and education for poor children, that the $1.6-billion increase would come at the expense of child-welfare programs. That created another tense moment: Higher-education lobbyists had to hurry to assure the Children's Defense Fund that they were not interested in stealing money from their programs. The Children's Defense Fund is part of a coalition of several education associations that lobbies Congress to approve a robust budget for education, and education lobbyists considered it important that all those associations remain united in their push for the extra education money.

Mr. Chiles's aides say they alerted the Children's Defense Fund because they believed a $1.6-billion increase for Education Department programs would have required budget-writers to take money from programs for poor children. But many higher-education officials say Mr. Chiles was trying to splinter the education alliance.

"That's the problem with education," says one higher-education representative. "It's always been easy to divide us."

As it turned out, a schism never developed. Mr. Chiles agreed to the $1.6-billion increase and included it in the budget package that was approved by the Senate. A House-Senate conference committee is now working to smooth out the differences in the budget blueprints. (The House bill, approved last month, would provide about $500-million more for education than would the Senate budget.)

Among Toughest Bargaining Sessions

Many college representatives say the bargaining sessions in the Senate were among the toughest they have ever had over a budget resolution.

Robert H. Atwell, president of the American Council on Education, said college officials had worked harder this year, in part because of what Mr. Atwell called the "Bennett factor." Education Secretary William J. Bennett's criticisms of college curricula and tuition increases has been getting a lot of attention from the press.

"We wanted to be sure that wouldn't be translated into anything helpful to his cause in the Congress," says Mr. Atwell. Mr. Bennett had proposed large reductions in education spending.

A few higher-education lobbyists are skeptical about the impact of the lobbying campaign. Andrea Bolling, assistant vice-president of federal relations for the American Association of Community and Junior Colleges, says the Senate probably would have approved the $1.6-billion increase regardless of what lobbyists did.

"Members of Congress understand that their constituents really care about the education of their children," says Ms. Bolling. "If education really weren't that important to the American people, we wouldn't have gotten that money."

2-Year Colleges Lobby Aggressively for Added State Money

PHOTOGRAPH FOR THE CHRONICLE BY ROSE M. PROUSER

Peg Davis, community-college lobbyist, talks with Ronald R. Cowell, chairman of an education committee in the Pennsylvania legislature.

Continued from Page 1

ers receive a weekly bulletin from their lobbying group detailing the status of bills, changes in key committees, voting records, and legislators who the group thinks should receive notes of thanks for their work on behalf of community colleges.

► In California, a group of community-college administrators and trustees has hired A. Alan Post, who formerly occupied the powerful position of state legislative analyst, to develop a new proposal for financing the colleges.

► In Florida, community-college leaders make certain that at least one community-college president or trustee is at the State Capitol every day of the legislative session.

Lack of Appreciation by Legislators

Community-college leaders cite a variety of reasons for those developments. Many say that more aggressive lobbying has become a necessity, because legislators often fail to appreciate the role and needs of community colleges.

David H. Ponitz, president of Sinclair Community College, says, "Some suggest that what a community college is doing is less important than what a four-year college is doing. I don't subscribe to that.

"Two- and four-year colleges have an educational division of labor, and neither one should be a second-class citizen. I'm not afraid to battle for that concept."

When he plays host to legislators on his campus, Mr. Ponitz says, he gives them name tags that include the number of their constituents enrolled in Sinclair programs. "I note that it's usually more than they won their last election by," he says.

Thomas M. Bernthal, executive director of the Michigan Community College Association, says the problems of part-time students are much more important to community colleges, who are serving more and more older students, than to their colleagues in other areas of higher education.

"What we're doing now," he says, "is communicating our special needs to legislators so our colleges are better understood."

Another reason for the increased lobbying is that community colleges cannot offer legislators some of the perquisites available from state universities.

"You don't have 50-yard-line seats at football games, so you go a different route," says Jeff Hockaday, chancellor of the Virginia Community College System. "You visit legislators at their homes, at their offices, and at the grocery store."

Based on that philosophy, Virginia's two-year college leaders set up campus tours for every legislator between each legislative session.

Nearly $5-Billion from States

Community-college lobbying efforts are not restricted to special legislation affecting only two-year institutions. Like their counterparts in other segments of higher education, community-college leaders are concerned with obtaining more money for their institutions. State governments appropriated nearly $5-billion for community-college operating expenses in the current academic year and college officials are always seeking more.

Leslie Koltai, chancellor of the Los Angeles Community College District and chairman of the group studying the financing of California's community colleges, says, "We can't maintain the community

Continued on Following Page

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on 3 Charges of Filing False Expense Claims and 1 of Perjury

State identical travel claims for three trips to Washington in 1979. Also, according to the indictment, he lied to the grand jury during its investigation of the charges.

The charges stem from a period in 1979 when Mr. Leone was working for the state regents and also serving as a paid consultant to Rose State, where he had formerly been president.

All Would Be Felonies

The grand jury also said that the consulting arrangement between Mr. Leone and Rose State had violated the Oklahoma Code of Ethics for State Officials and Employees because of the lack of a formal agreement outlining his duties and a method for insuring that they were performed. No charges were brought for that alleged violation, however, because the legal time limit for hearing such charges has expired.

All of the offenses with which Mr. Leone was charged are felonies. Each count on the travel vouchers is punishable by up to two years in prison and a fine of up to $10,000. If convicted of perjury, Mr. Leone could be sentenced to five years more.

The former chancellor has said that on some business trips he performed work for both the state board and Rose State, and billed the two groups accordingly. Mr. Leone could not be reached for comment last week.

Mr. Leone has been under fire for the consulting arrangement since last fall, when Henry Bellmon, then the Republican candidate for Governor, called for his suspension. After Mr. Bellmon was elected, he continued to call for Mr. Leone's suspension or resignation and clashed with the regents over their support of the chancellor.

The regents seemed poised to dismiss Mr. Leone last month, but instead accepted an agreement under which he would resign and serve as an adviser to the interim chancellor through the end of next month. The regents then agreed to pay Mr. Leone $50,000 for leaving his position on short notice and serving as an adviser.

After the indictments were handed up, the regents voted to suspend Mr. Leone, with pay, pending the outcome of the trial, which was set to begin at the end of August.

Regents' 'Superficial Understanding'

As far as Rose State College was concerned, the grand jury said, "Prior to January 1986, Rose State College regents had only a superficial understanding of the financial system of the school. The regents were presented with little information, and requested no more, on funding sources, pooling mechanisms, accounting methods, and expenditures."

Larry Nutter, the new president of Rose State, a two-year college with an enrollment of about 10,000 students, said that the institution had had problems in the past, but that the regents had adopted many new financial procedures in the past year.

The grand jury also took the first step to

Continued on Following Page

2-Year Colleges Lobby Aggressively for Added State Funds

Continued from Preceding Page

colleges with the present system, so we have to take the leadership."

While California community colleges seek to change the method of financing their institutions, lobbyists for two-year colleges in other states simply want more money.

In Illinois, they are pushing the state to increase its share of the costs of running the colleges from 32 to 50 per cent; in New York, the Legislature traditionally responds to pressure from community-college groups and increases the budgets of two-year colleges over the recommendation of the Governor.

Another reason that community colleges must be aggressive in making their needs known to state legislators has to do with the fact that the colleges are partially financed by local money. Legislators don't have to take the heat for a tuition increase if they don't approve enough money for community colleges; they can simply pass the buck to local governments. When tuition rises at public 4-year institutions, however, the legislators get the full blame.

Relying on local governments is "too easy an answer," says Mr. Bernthal, "so we have to communicate with them about how unrealistic it usually is."

Many Statewide Associations

The lobbying methods vary. In many states, community-college administrators and trustees have formed associations to represent them. Those groups, which are not directly supported by the state government, are free to raise and spend money on overt lobbying activities.

In states without such associations, lobbying is coordinated by state boards or by college presidents.

Regardless of the approach, the lobbying efforts have several common features.

Almost all rely on the two-year institutions' job-training programs. "With economic development as the big issue, community colleges are in a really good position," says Gary W. Davis, executive director of the Illinois Community College Trustees Association.

Community colleges, Mr. Davis says, "have fewer qualms about being vocationally oriented," so they can join state economic-development programs and publicize their involvement to gain more political support.

"We are the backbone of efforts to retrain workers, and we bring the legislators to campuses so they can see that for themselves," says Hal Roach, executive director of the Ohio Technical and Community College Association.

Many of the lobbying efforts also rely on trustees of the colleges, who have previously been more involved with governing the institutions than with securing more state support for them.

Trustees, Mr. Roach says, "are among the best people for us to use because they are prominent in their communities and already have clout."

The emphasis on statewide lobbying efforts has paid off, community-college officials say.

"Community colleges used to be fragmented, unable to represent themselves effectively because they were single institutions," says Jerome F. Wartgow, president of the Colorado Community College and Occupational Education System.

Although statewide lobbying efforts may mean a particular college does not receive its top priority, the colleges as a group accomplish much more, he says.

Says Peg Davis, the lobbyist for the Pennsylvania community colleges: "In dealing with legislators, we have to emphasize that the community colleges are pulling together. If you have one college asking for one thing, and one for something else, you're just cutting yourself off at the knees."

Unity is especially important in Pennsylvania, she says, because the state has only 14 community colleges, and the districts of many legislators do not include such institutions. "When you have a statewide strategy, you can say that every legislator should care," she says.

More Money, More Rules

The new lobbying efforts do present some risks, community-college officials say. When state leaders agree to provide more financial support for the institutions, they usually also want more control over them.

Notes Mr. Davis of the Illinois trustees' association: "He who pays the piper calls the tune."

In his state and elsewhere, legislators and governors have been more likely to regulate the institutions in recent years, he says. Still, he adds, most of his state's colleges would accept a little more state regulation if it were accompanied by increases in state funds.

In California, the shift from local to state financing has led to a series of bitter fights between the locally elected college boards and some state legislators. After the passage of strict limits on property taxes in 1978—known as Proposition 13—state support for two-year colleges nearly doubled at the same time that local support was being cut in half.

As civic and legislative commissions studied the governance of the colleges in the past year, many panel members pushed for the elimination of the local boards or for major curbs on their power. Although the local boards appear to have fought off many of the changes, some observers in the state say the boards have offended many of the legislators whose support they will need in future political battles.

Another potential problem with increased community-college lobbying is competition with other sectors of higher education.

Jerold Roschwalb, director of governmental relations for the National Association of State Universities and Land-Grant Colleges, says he has not heard major complaints from the institutions he represents about the stepped-up lobbying of community colleges.

Attitudes at research universities about community-college lobbying fall largely into two groups, he says:

"One view sees the world as a fixed pie. Every time someone else sits at the table, everyone gets less pie. But others see it as a baking contest. With more people at the table, you can make a better pie," he says.

Mr. Roschwalb says he takes the latter view because community colleges generally have different legislative needs. "Community colleges don't run medical schools. They don't run physics Ph.D. programs," he says.

'We're Not Lobbying Alone'

"The danger lies in community colleges or universities believing in the fixed pie and arguing against each other," he says, adding that such disputes need not occur.

"I would rather my institutions get 50 per cent of $1,000 than 100 per cent of $500," he adds.

Most community-college officials say that in improving their stature with legislators, they do not aim to detract from four-year colleges and universities.

Ronald J. Horvath, director of Jefferson Community College, the largest two-year institution in Kentucky, says, "We're not lobbying alone. We're saying that we are part of the whole system and coordinating efforts."

Mr. Horvath acknowledges that he has little choice, since his college is part of the University of Kentucky system. And in many states that base their financing formulas strictly on enrollment, all of higher education does either well or poorly in the state budget.

Says Illinois's Mr. Davis: "The key issue in the state is the level of support for higher education generally."

'We're Getting Better and Better'

Whether they are lobbying for more appropriations or for special programs, community-college officials say they have been largely successful using the new techniques. Pennsylvania's Mr. Shoemaker points to a 15.8-per-cent increase in state appropriations for his institutions last year.

In Oregon, even though this is a tight budget year, legislators are moving toward increasing the community colleges' budgets over the recommendation of Democratic Gov. Neil Goldschmidt. Legislators have included community colleges in the planning of job-training programs more than ever before, says Roger Bassett, executive secretary of the Oregon Community College Association.

Chancellor Hockaday of Virginia credits lobbying efforts for legislative approval of a plan to decrease tuition by 15 per cent over the last two years.

Following those successes, college officials say they intend to continue their lobbying programs.

Says Mr. Bernthal of Michigan: "We're getting better and better at this, and we're going to be even more assertive in the years to come."

State Appropriations for Community Colleges

Following are two tables showing state appropriations for the operating expenses of community colleges in 1986-87 and the percentage change in appropriations since 1984-85.

The table on the left lists states where community colleges are jointly financed by state and local governments. In most of these states, local governments pay at least 10 per cent of the costs of running the colleges; in many of them, the local governments pay more than one-third.

The table on the right lists states where the state government provides most or all of the public support to the colleges.

Community colleges in both groups of states also receive revenue from tuition, local businesses, fund raising, and other sources.

The figures were compiled by the Center for Higher Education at Illinois State University.

Nine states—Alaska, Hawaii, Kentucky, Louisiana, Maine, New Hampshire, South Dakota, Vermont, and Wisconsin—do not appear on either list because their community colleges are operated as part of university systems, or because the states do not have public community colleges.

Colleges Supported by Local and State Funds

	1986-87	2-year change
Arizona	$ 59,905,000	+25%
Arkansas	20,790,000	+11%
California	1,199,057,000	+ 8%
Colorado[1]	10,831,000	+ 6%
Florida	392,662,000	+17%
Idaho	5,815,000	+11%
Illinois	203,240,000	+19%
Indiana	15,747,000	+25%
Iowa	60,003,000	+ 4%
Kansas	27,056,000	+ 6%
Maryland	96,143,000	+ 6%
Michigan	186,722,000	+17%
Mississippi	50,000,000	− 1%
Missouri	51,845,000	+20%
Montana	3,102,000	− 4%
Nebraska	22,447,000	− 3%
New Jersey	83,765,000	+21%
New Mexico[1]	908,000	+14%
New York[1]	275,530,000	+21%
Ohio[2]	78,243,000	+31%
Oklahoma[1]	457,000	+ 1%
Oregon	59,571,000	+10%
Pennsylvania	77,500,000	+12%
Texas	446,436,000	− 1%
Wyoming	32,051,000	+10%
Total	$3,461,826,000	+11%

Colleges Supported by State Funds

	1986-87	2-year change
Alabama	$ 58,550,000	+11%
Colorado[1]	44,733,000	+ 7%
Connecticut	45,492,000	+23%
Delaware	21,472,000	+14%
Georgia	65,663,000	+16%
Massachusetts	130,530,000	+20%
Minnesota	58,599,000	+10%
Nevada	18,924,000	+36%
New Mexico[1]	5,454,000	+ 1%
New York[1]	84,799,000	+ 4%
North Carolina	304,873,000	+19%
North Dakota	4,748,000	+51%
Oklahoma[1]	64,366,000	+ 3%
Rhode Island	21,046,000	+13%
South Carolina	87,060,000	+24%
Tennessee	58,567,000	+14%
Utah	15,403,000	+15%
Virginia	148,403,000	+16%
Washington	198,230,000	+ 5%
West Virginia	10,388,000	+ 8%
Total	$1,447,320,000	+14%

[1] State has both locally supported community colleges and some which receive little or no local aid.

[2] Estimate

SOURCE: CENTER FOR HIGHER EDUCATION
ILLINOIS STATE UNIVERSITY

Former Okla. Official Indicted on Charges of Filing False Expense Claims, Perjury

Continued from Preceding Page

remove William G. Bernhardt from the Rose State board. It said Dr. Bernhardt had been paid by Rose State for eight years for performing physical examinations on student athletes over that time. Oklahoma law forbids regents from receiving funds for any good or service they sell to the colleges they govern.

Dr. Bernhardt acknowledged that he had been paid for the examinations, but said he had charged below market rates. He added that the college had initiated the arrangement. "As a physician, I generally don't turn people down," he said, adding, "That's our code of ethics."

He said he was unaware, until the grand-jury proceedings, of any possible violation of state law. "I'm not well versed on the laws of colleges," he said.

Charges Come at Bad Time

If Dr. Bernhardt does not resign this week, a date will be set for a civil trial on the charge of corruption. If convicted, he will be removed from the board, but could receive no additional punishment. Dr. Bernhardt said last week he did not know whether he would resign or stand trial.

The new charges against Mr. Le-

difficult time for higher education in Oklahoma, college officials here said.

Another former Rose State president, Joe T. Packnett, has already been convicted of embezzling nearly $500,000 from the college.

And the president of Southeastern Oklahoma State University, Leon Hibbs, is under investigation by several state agencies over allegations that he mismanaged foundation funds and violated state anti-nepotism laws.

Probes Have Raised Questions

"There's no question but the investigations have been to the detriment of Oklahoma higher education," said Dan S. Hobbs, interim chancellor. "They've raised questions in the minds of many people about the conduct here."

William E. Jaynes, president of the Oklahoma State Conference of the American Association of University Professors, said faculty members were afraid that all the allegations would hurt the colleges' ability to obtain support from the state.

"We're really apprehensive," said Mr. Jaynes, a professor of psychology at Oklahoma State University. "Until things get settled down, everybody's going to be on edge."

Give & Take

Robert L. Payton hadn't been on the job at the University of Virginia for very long before deciding to try to organize a seminar there on philanthropy in action.

The program he hopes to establish would be similar to one he organized at Columbia University, which brought foundation and corporate officials together with scholars to look at a single issue over a long period of time. The subject of that seminar last year was the response in the West to the famine in Ethiopia.

"It is in the extreme circumstances of relief and development that the virtues of philanthropy can best be observed," said Mr. Payton.

"A seminar of this type is tough to do," he added, "but I feel it's the best model for continuing education in philanthropy."

▪

At Virginia, where he took up his duties this month, Mr. Payton is a scholar-in-residence and associate director of the White Burkett Miller Center of Public Affairs. In January he ended a 10-year term as president of the Exxon Education Foundation. A reception to honor Mr. Payton for his work in organized philanthropy was held last week in Manhattan.

"New York is very good about celebrating people who come to power, but as the custodian of memory the New York Public Library also has the responsibility to celebrate people who leave power," said Vartan Gregorian, president of the library, which co-sponsored the reception with the Association of Governing Boards of Universities and Colleges.

Mr. Payton said he did not know if he deserved such an occasion, "but as Jack Benny once remarked, I have arthritis and I don't deserve that, either."

▪

Robert L. Gale, president of the A.G.B., said the group had gathered "to encourage Bob as he continues to strive to bring about greater public understanding of philanthropy."

Mr. Payton did not pass up an opportunity to talk on the subject.

He said his attention more and more was fixed on the need to insure a future for coming generations.

"A free and open and democratic society is the most important thing we can give our children and young people," he said, "and a strong philanthropic tradition is essential to the preservation of that society.

"And I strongly believe," he said, "that we must study this tradition if we are to improve it and pass it on."

Noting the growing number of university programs to study philanthropy, he said: "The time is here to study philanthropy, warts and all, to bring to the surface all of the criticisms of it."

He called for more and better research and writing on the subject, which he said could not be expected until there was more support for such work from organized philanthropy.

Philanthropy

College Endowments Up 26.9 Pct. in 1985-86, Buoyed by Strong Performance of Stock Market

Study of 272 funds includes investments' market-value gains as well as interest and dividend income

WASHINGTON

The stock market's strong performance helped drive up the value of college and university endowments by an average of 26.9 per cent in academic 1985-86.

A study by the National Association of College and University Business Officers, the results of which were released last week, found that the total market value of the 272 endowments was $40.5-billion at the end of fiscal 1986. One year earlier, the value of 284 endowments in the study was $33.4-billion.

The 272 endowments were reported by 260 institutions of higher education. A preliminary report on the study based on the performance of 153 investment pools (*The Chronicle*, January 7) showed an average increase of 27.1 per cent in the value of those endowments for the 12 months ending June 30, 1986.

According to NACUBO officials, the study now includes "a substantial majority" of the four-year institutions with endowments of at least $1-million. The number of colleges and universities participating in the study, now in its 12th year, has more than doubled since 1980.

Second-Highest One-Year Return

Last year's increase in the value of the average endowment was the second-highest one-year return in the study's history. In fiscal 1983 the value of endowments was up 41.3 per cent; it declined 2.8 per cent the next year.

The increase in 1986 marked the best back-to-back years for endowment performance in a decade. In 1985, the value of endowments rose 25.4 per cent.

The figures represent "total-return rates" for endowments and reflect changes in the market value of investments as well as interest and dividend income.

Last year's increase was higher than the 26.4-per-cent return on a composite index based on the same asset mix as the average endowment in the study.

The average investment pool in the study had 55.2 per cent in equities, 29.4 per cent in bonds, 11.5 per cent in cash, 1.9 per cent in real estate, and 1.5 per cent in miscellaneous other assets.

Largest Endowments per Student

Private	Students	Amount
Rockefeller U.	110	$4,324,300
Academy of the New Church	349	320,800
Princeton U.	6,075	318,400
Baylor C. of Medicine	913	234,300
Harvard U.	16,236	211,600
Mount Sinai School of Medicine	490	198,800
California Institute of Technology	1,850	197,900
Rice U.	3,949	191,400
Swarthmore C.	1,301	179,700
Grinnell C.	1,239	168,500
Public		
Virginia Military Inst. Foundation	1,483	$44,500
U. of Virginia	16,916	20,100
U. of Delaware	15,631	16,800
U. of Cincinnati	24,680	8,800
C. of William and Mary	6,294	7,900
U. of Pittsburgh	27,000	7,300
Washington State U.	16,136	7,100
U. of Michigan	41,250	6,100
U. of Vermont	9,303	6,000
Kansas U. Endowment Assoc.	23,094	6,000

Note: Based on market value of endowments last June 30, and full-time-equivalent enrollment.

SOURCE: NATIONAL ASSOCIATION OF COLLEGE AND UNIVERSITY BUSINESS OFFICERS

The value of Harvard University's endowment, $3.43-billion, was the highest of all institutions in the study. Harvard, which in all previous years had led the endowment rankings, dropped to second place at the end of fiscal 1985, when the University of Texas system topped the list. Since then, however, the Permanent University Fund in Texas has been divided between the University of Texas system, which received two-thirds, and Texas A&M University, which was given the other third. With an endowment valued at $2.53-billion, the University of Texas system ranked second in 1986.

Rockefeller Ranks High

Ranked by endowment per full-time-equivalent student, Rockefeller University led all institutions with $4.3-million for each of its 110 students. A graduate medical research and training institution, Rockefeller University offers only the Ph.D., and students receive fellowships covering almost all of their expenses.

The increase in the value of the average endowment for the three-year period ending last June was 15.9 per cent. The five-year increase was 16.6 per cent; over 10 years the increase was 12.8 per cent.

Earlier NACUBO had indicated the large gain in the value of endowments was expected because of the rise in stock prices.

Bruce M. Dresner, vice-president for financial administration at Dartmouth College and the performance analyst for the endowment study, said earlier this year that more and more institutions were exploring non-traditional areas of investment, including foreign securities.

The larger endowments, with $100-mil-

Continued on Page 28, Column 1

Gifts to U.S. Charities Top $87-Billion, 82 Pct. of It from Individuals

NEW YORK

Gifts to charitable organizations and causes in the United States reached an estimated total of $87.2-billion in 1986, an increase of 9.4 per cent over the previous year and a record.

The figures are from *Giving USA*, an annual report on contributions published by the American Association of Fund-Raising Counsel's Trust for Philanthropy. The 32nd edition of the report, covering giving in 1986, was issued last week.

The $71.7-billion in contributions from individuals was 9.2 per cent more than the previous year and represented 82 per cent of all dollars given to charity in 1986.

Bequests increased 12.5 per cent, to $5.8-billion, and brought the total for all gifts accounted for by individuals to 88.9 per cent of last year's contributions.

"Americans have proven once again how generous they can be, especially at a time when our non-profit institutions are becoming more dependent on outside funds," said Robert L. Thompson, chief executive officer of Ketchum, Inc., and chairman of the A.A.F.R.C. board.

Foundation grants totaled $5.17-billion in 1986, an increase of 16 per cent. Corporate contributions were up 2.3 per cent, to $4.5-billion.

Philanthropy and Quality of U.S. Life

The overall increase in giving "is testimony to the tremendous impact philanthropy has on the quality of life in the United States," said Charles E. Lawson, president of Brakeley, John Price Jones, and chairman of the A.A.F.R.C. Trust for Philanthropy, the association's non-profit research, education, and publishing arm.

An estimated $12.7-billion was given to education at all levels last year, an increase of 16 per cent. Colleges and universities received the largest single portion of such gifts, an estimated 60 per cent. In 1986 contributions to education accounted for 14.6 per cent of all giving, moving ahead of gifts to health-related organizations and causes for the first time in several years.

Religion, as in past years, led all recipient categories with $40.9-billion in gifts, an increase of 9.2 per cent. About 47 per cent of charitable contributions go to religion.

All recipient categories received more in contributions in 1986 than they had the preceding year. The figures for the other categories were as follows:

► Health, up 9.6 per cent to $12.26-billion, 14 per cent of all giving.

► Human-service organizations, up 7.4 per cent to $9.13-billion, 10.5 per cent of the total.

► Arts, culture, and humanities, up 14.8 per cent to $5.83-billion, 6.7 per cent of the total.

► Public and social benefit organizations, up 7.2 per cent to $2.38-billion, 2.7 per cent of the total.

► Other causes, up 2.6 per cent to $3.99-billion, 4.6 per cent of the total.

Contributions from individuals represented 2.06 per cent of personal income in 1986. Giving by individuals grew by 4 per

Continued on Page 28, Column 3

U. of Richmond Gets $20-Million for New Center

RICHMOND

The University of Richmond has received a $20-million gift to finance a new program in leadership studies and to help build a center to house it.

The gift, from Mr. and Mrs. Robert Jepson, Jr., is the second largest in the university's history. A $6-million first payment on the pledge will be made this summer. It will include $1-million for a professorship in business policy announced last fall. The professorship is named for W. David Robbins, dean of the university's business school from 1959 to 1977 and a former instructor of Mr. Jepson, who will hold the chair until his retirement.

Mr. Jepson, a 1964 graduate of the university, and his wife are the principal owners of the Jepson Corporation, a conglomerate based in Elmhurst, Ill.

Building Will House Center

The first installment on their gift will be used to help finance a 65,000-square-foot building to house the leadership-studies center. The facility, for which the university plans to raise an additional $2.5-million, will be named Robert S. and Alice A. Jepson Hall. The building, which will also house the university's academic computing center and its mathematics and computer science department, is expected to be ready in about two years.

Once the center is built and the leadership program under way, the Jepsons and an anonymous donor associated with them will provide an additional $15-million for the project, and the university, as part of a forthcoming capital campaign, will seek to raise $10-million in endowment for it.

The largest gift ever received by the University of Richmond was a $50-million contribution made by the E. Claiborne Robins family in 1969. At the time it was the largest single gift ever made to a college or university in the United States.

2 Anonymous Donors Give $1.75-Million

DANVILLE, KY.

Centre College has received two anonymous gifts totaling $1.75-million.

Both contributions were made to a capital campaign that the college began this spring to raise $33-million in three years.

A gift of $1-million from an anonymous donor will be added to Centre's endowment, and a $750,000 gift will be used to increase faculty salaries. The capital campaign includes goals of $4-million in endowment to support student aid and $4-million in endowment for the improvement of faculty salaries.

The announcement of the most recent gifts brings the total raised thus far in the campaign to $14.7-million. When the drive was announced in March the college already had raised $12.7-million. That figure included $1-million grants from two Louisville institutions: the James Graham Brown Foundation, and Humana, Inc., a health-care company.

Earlier the college received a $3-million grant from the Olin Foundation, which will cover the entire cost of building and equipping a new physical-science building.

FACT-FILE

Value of 260 Endowments on June 30, 1986

1986 rank	Institution	Market value	
		June 30, 1985	June 30, 1986
1.	Harvard University	$2,694,800,000	$3,435,010,000
2.	University of Texas System [1]	2,087,139,000	2,530,730,000
3.	Princeton University	1,519,240,000	1,934,010,000
4.	Yale University	1,308,690,000	1,739,460,000
5.	Stanford University [1]	1,083,890,000	1,371,870,000
6.	Columbia University	978,640,000	1,266,640,000
7.	Texas A&M University [1]	not reported	1,110,440,000
8.	Massachusetts Institute of Technology	770,167,000	971,346,000
9.	Washington University	622,076,000	958,461,000
10.	University of Chicago	640,800,000	802,500,000
11.	Rice University	570,678,000	755,782,000
12.	Emory University [1]	535,825,000	745,188,000
13.	Northwestern University [1]	552,201,000	709,236,000
14.	Cornell University	518,956,000	673,848,000
15.	University of Rochester	567,696,000	576,642,000
16.	University of Pennsylvania	437,064,000	540,084,000
17.	New York University [1]	450,708,000	519,965,000
18.	Johns Hopkins University	393,129,000	491,543,000
19.	Dartmouth College	386,021,000	477,774,000
20.	Rockefeller University	391,284,000	475,678,000
21.	Vanderbilt University	318,322,000	446,458,000
22.	University of Notre Dame	306,930,000	388,104,000
23.	California Institute of Technology [2]	284,300,000	366,193,000
24.	University of Southern California	267,602,000	361,784,000
25.	University of Virginia	256,477,000	340,387,000
26.	Case Western Reserve University	244,126,000	307,250,000
27.	S[illegible]h College	222,378,000	272,662,000
28.	Wellesley College	205,000,000	265,000,000
29.	University of Delaware	212,660,000	262,798,000
30.	University of Michigan	203,675,000	251,517,000
31.	Williams College	199,996,000	247,830,000
32.	Wesleyan University	188,675,000	244,889,000
33.	Swarthmore College	174,429,000	233,765,000
34.	Carnegie Mellon University	193,458,000	228,768,000
35.	Amherst College	168,134,000	224,428,000
36.	University of Minnesota	181,288,000	224,265,000
37.	Loyola University of Chicago	169,009,000	219,467,000
38.	University of Cincinnati	169,387,000	218,367,000
39.	Baylor College of Medicine	153,341,000	213,917,000
40.	Grinnell College	175,053,000	208,787,000
41.	Ohio State University	167,281,000	207,129,000
42.	George Washington University	169,194,000	207,061,000
43.	University of Richmond	162,748,000	204,603,000
44.	Vassar College	156,100,000	204,084,000
45.	Baylor University [3]	175,611,000	202,989,000
46.	Pomona College	143,551,000	199,320,000
47.	University of Pittsburgh	160,463,000	197,875,000
48.	Berea College	150,261,000	193,716,000
49.	Wake Forest University	145,633,000	186,794,000
50.	Tulane University	140,121,000	179,765,000
51.	Rensselaer Polytechnic Institute	141,372,000	177,443,000
52.	Georgetown University	139,072,000	173,836,000
53.	Middlebury College	125,791,000	163,388,000
54.	Lehigh University	128,138,000	156,212,000
55.	Thomas Jefferson University	108,738,000	151,444,000
56.	Lafayette College	113,073,000	149,101,000
57.	University of Florida Foundation	104,186,000	138,732,000
58.	Kansas U. Endowment Association	95,134,000	138,420,000
59.	Boston University	104,316,000	131,525,000
60.	Mount Holyoke College	96,757,000	130,214,000
61.	State University of New York [4]	92,620,000	124,501,000
62.	University of Nebraska	112,075,000	124,442,000
63.	Carleton College	96,988,000	123,850,000
64.	Bowdoin College	89,697,000	121,004,000
65.	Brandeis University	107,160,000	120,536,000
66.	Saint Louis University	94,921,000	120,493,000
67.	Washington State University	97,158,000	115,160,000
68.	Rochester Institute of Technology	91,160,000	114,770,000
69.	Syracuse University	89,636,000	112,625,000
70.	Academy of the New Church	89,198,000	111,975,000
71.	Occidental College	73,262,000	109,455,000
72.	Pennsylvania State University	53,648,000	109,418,000
73.	University of North Carolina-Chapel Hill	79,902,000	105,318,000
74.	University of Miami [3]	80,564,000	102,142,000
75.	Trinity College (Conn.)	74,107,000	100,856,000
76.	Rutgers University	80,515,000	98,363,000
77.	Mount Sinai School of Medicine	74,770,000	97,417,000
78.	Tufts University	97,675,000	97,232,000
79.	University of Missouri	not reported	96,008,000
80.	Bryn Mawr College [3]	not reported	95,567,000
81.	Colgate University [3]	69,786,000	93,303,000
82.	Hamilton College	73,261,000	90,776,000
83.	Southwestern University	67,314,000	87,684,000
84.	University of Illinois Foundation	68,151,000	86,842,000
85.	University of Washington	72,909,000	85,470,000
86.	Agnes Scott College	not reported	81,798,000
87.	Union College (N.Y.)	68,043,000	81,160,000
88.	University of Wisconsin System	70,937,000	80,849,000
89.	University of the South	60,654,000	78,160,000
90.	Radcliffe College	62,516,000	77,964,000
91.	Bucknell University	62,214,000	77,837,000
92.	Whitman College	63,603,000	77,659,000
93.	Hampton University	58,785,000	76,572,000
94.	Butler University [3]	64,585,000	75,052,000
95.	Claremont McKenna College	55,241,000	72,486,000
96.	Worcester Polytechnic Institute	$64,456,000	$70,248,000
97.	Santa Clara University	55,873,000	67,908,000
98.	University of Alabama System [2]	52,309,000	67,757,000
99.	University of Wisconsin Foundation	45,394,000	67,543,000
100.	Mercer University	50,486,000	67,340,000
101.	Haverford College	54,927,000	66,584,000
102.	Virginia Military Institute Foundation	not reported	66,060,000
103.	Virginia Tech Foundation	46,270,000	64,530,000
104.	Rhodes College	53,193,000	64,091,000
105.	Willamette University [3]	54,569,000	61,757,000
106.	College of the Holy Cross	39,663,000	61,301,000
107.	College of Saint Thomas	not reported	60,437,000
108.	Colby College	46,549,000	59,609,000
109.	Berry College	44,885,000	58,878,000
110.	Davidson College	46,380,000	58,650,000
111.	Pepperdine University [5]	55,965,000	58,599,000
112.	Drew University	51,859,000	58,578,000
113.	University of Tennessee System	47,664,000	57,936,000
114.	University of Vermont	45,120,000	55,928,000
115.	American University of Beirut	36,444,000	54,951,000
116.	Simmons College	44,478,000	53,994,000
117.	Lawrence University	42,484,000	53,009,000
118.	Franklin and Marshall College	33,860,000	52,057,000
119.	College of Wooster	40,404,000	51,804,000
120.	Endowment Association of the College of William and Mary	31,812,000	49,697,000
121.	Furman University [3]	33,484,000	49,447,000
122.	Marquette University	41,564,000	49,287,000
123.	Mills College	39,663,000	49,141,000
124.	Goucher College	not reported	48,354,000
125.	Denison University	40,828,000	48,205,000
126.	Ohio University	36,041,000	47,587,000
127.	Fordham University	36,621,000	47,322,000
128.	Loyola Marymount University	not reported	46,996,000
129.	Philadelphia College of Pharmacy and Science	37,358,000	46,821,000
130.	Teachers College, Columbia University [1]	35,073,000	46,291,000
131.	Auburn University [2]	37,135,000	45,264,000
132.	Austin College	37,396,000	44,452,000
133.	Reed College	30,314,000	42,751,000
134.	Spelman College	33,382,000	42,605,000
135.	Barnard College	33,366,000	42,322,000
136.	University of Maryland	33,468,000	41,958,000
137.	Rhode Island School of Design	33,751,000	41,840,000
138.	Sweet Briar College	33,939,000	40,241,000
139.	University of Colorado Foundation	27,600,000	40,100,000
140.	Ithaca College	31,284,000	39,666,000
141.	Scripps College	25,638,000	39,268,000
142.	Hendrix College [5]	31,393,000	39,193,000
143.	University of Arizona	32,778,000	39,014,000
144.	Temple University	31,102,000	38,428,000
145.	Indiana University	26,201,000	38,223,000
146.	Albion College	29,680,000	38,118,000
147.	University of Nevada System	27,146,000	37,751,000
148.	University of Tulsa [3]	30,797,000	37,279,000
149.	University of Illinois	31,415,000	37,030,000
150.	Arkansas College	31,076,000	36,459,000
151.	Centre College of Kentucky	29,108,000	36,417,000
152.	Virginia Commonwealth University	24,033,000	35,299,000
153.	University of Dayton	22,350,[illegible]	35,136,000
154.	Oregon State Board of Higher Education	26,325,000	34,294,000
155.	Baldwin-Wallace College	24,484,000	33,981,000
156.	Allegheny College	25,903,000	33,760,000
157.	Wittenburg University	21,092,000	32,837,000
158.	University of Puget Sound [1]	26,176,000	32,430,000
159.	Dickinson College	25,520,000	32,223,000
160.	Wheaton College (Mass.)	25,541,000	31,632,000
161.	Clarkson University	24,375,000	31,545,000
162.	Connecticut College [3]	24,833,000	31,370,000
163.	Clark University	23,501,000	31,232,000
164.	North Carolina State University	15,725,000	30,329,000
165.	Transylvania University	not reported	30,111,000
166.	Valparaiso University	23,385,000	29,828,000
167.	Creighton University	22,866,000	29,438,000
168.	Kalamazoo College	23,831,000	28,653,000
169.	Bentley College	17,035,000	28,516,000
170.	Pratt Institute [1]	21,237,000	26,501,000
171.	Medical College of Virginia Foundation	18,880,000	26,425,000
172.	Bryant College [5]	16,786,000	25,813,000
173.	University of New Hampshire System	21,111,000	25,720,000
174.	Washington and Jefferson College	18,262,000	24,979,000
175.	Gettysburg College [3]	19,237,000	24,186,000
176.	Norwich University	18,662,000	23,608,000
177.	DePaul University	not reported	23,507,000
178.	Babson College	20,062,000	23,378,000
179.	Washburn University of Topeka	16,586,000	22,617,000
180.	Clemson University	16,667,000	22,322,000
181.	Knox College	19,991,000	22,087,000
182.	Skidmore College	16,774,000	21,754,000
183.	Wayne State University [2]	17,839,000	21,594,000
184.	Loyola College	9,017,000	21,470,000
185.	St. John's College (Md.)	16,320,000	21,375,000
186.	Saint Mary's College (Ind.) [3]	18,226,000	21,275,000
187.	University of Arkansas	18,029,000	20,752,000
188.	Alfred University	15,481,000	19,837,000
189.	Illinois College	15,827,000	19,709,000
190.	Doane College	15,351,000	19,608,000

Continued on Following Page

[1] As of August 31, 1986
[2] As of September 30, 1986
[3] As of May 31, 1986
[4] As of March 31, 1986
[5] As of July 31, 1986
[6] As of December 31, 1985

Value of Endowments Rises Nearly 27 Pct. in Year

Continued from Page 25

lion or more in assets, had the highest average gain—29.7 per cent—primarily because they had a higher proportion of equity-related investments.

Endowments with between $25-million and $100-million in assets grew an average 26.4 per cent, and those with a value of less than $25-million increased 25.7 per cent.

The average rise was well above the rate of inflation for the period, which the Consumer Price Index set at 1.8 per cent and the Higher Education Price Index—a measure of the prices that colleges and universities pay for goods and services—put at 4.4 per cent.

After adjustments were made for the composition of assets, the NACUBO study found that investment pools that were externally managed had performed better in academic 1985-86 than those managed by the colleges and universities themselves. Only 26 of the investment pools in the study were managed internally.

The study also found that investment pools continued to shift assets from equities to bonds. Academic 1982-83 was the only year in which equity assets increased since the study began in 1974.

The endowment study is a project of the NACUBO Financial Management Committee's subcommittee on investments.

A summary of the report on the study appears in the May issue of *Business Officer*, NACUBO's monthly magazine. Copies of the complete report are available for $30 each prepaid for members of the association and $50 for others from NACUBO at P.O. Box 96164, Washington 20090.

—PAUL DESRUISSEAUX

Total Return on Endowments, Fiscal 1986*

	Periods ending June 30, 1986			
	1 year	3 years	5 years	10 years
All investment pools	+26.9%	+15.9%	+16.6%	+12.8%
By size				
$100-million or more	+29.7%	+16.8%	+17.4%	+13.6%
$25-million to $100-million	+26.4%	+15.7%	+16.5%	+12.6%
Under $25-million	+25.7%	+15.5%	+15.9%	+12.0%
Comparative measurements				
Standard & Poor's 500 Index	+35.5%	+19.1%	+19.1%	+14.5%
Salomon Brothers Bond Index	+27.1%	+18.5%	+20.6%	+ 9.9%
Consumer Price Index	+ 1.8%	+ 3.2%	+ 3.9%	+ 6.8%
Higher Education Price Index †	+ 4.4%	+ 5.5%	+ 6.5%	+ 7.4%

* Total-return rates represent change in market value, plus dividends and interest, for periods ending June 30, 1986, based on data for 272 investment pools of 260 colleges and universities.

† An index of changes in prices paid by colleges and universities for goods and services, developed by D. Kent Halstead, National Institute for Education.

SOURCE: NATIONAL ASSOCIATION OF COLLEGE AND UNIVERSITY BUSINESS OFFICERS

FACT-FILE—Continued

Value of 260 Endowments

1986 rank	Institution	Market value June 30, 1985	June 30, 1986
191.	Cornell College	$20,061,000	$19,561,000
192.	University of Maine	18,546,000	19,440,000
193.	Oregon Health Sciences U. Foundation	16,033,000	19,216,000
194.	Roanoke College	16,248,000	19,158,000
195.	University of Hawaii	14,675,000	18,973,000
196.	University of Oregon Foundation	17,134,000	18,971,000
197.	Drake University[3]	14,851,000	18,889,000
198.	Wells College	14,613,000	18,517,000
199.	Miami University	not reported	18,469,000
200.	Iowa State University Achievement Foundation	15,050,000	18,331,000
201.	Lake Forest College[3]	12,888,000	18,270,000
202.	Marietta College	13,392,000	18,010,000
203.	Hope College	14,632,000	17,876,000
204.	University of Akron	11,961,000	17,373,000
205.	Ohio Northern University[1]	13,714,000	17,056,000
206.	University of Mississippi	3,157,000	16,758,000
207.	Bradley University[3]	15,413,000	16,716,000
208.	University of Georgia	14,735,000	16,611,000
209.	Saint Norbert College	13,106,000	16,042,000
210.	Moravian College	11,805,000	14,769,000
211.	Rockhurst College	12,019,000	14,701,000
212.	U. of North Carolina at Greensboro	10,313,000	14,114,000
213.	Fairfield University	10,190,000	13,881,000
214.	Nazareth College of Rochester	10,807,000	13,093,000
215.	Mary Baldwin College	11,012,000	12,904,000
216.	Canisius College	9,138,000	12,890,000
217.	University of Scranton[3]	10,194,000	12,686,000
218.	Hahnemann University	12,249,000	12,459,000
219.	Ripon College	9,854,000	12,453,000
220.	Lynchburg College	9,882,000	11,923,000
221.	Ouachita Baptist University[3]	9,994,000	11,747,000
222.	Hastings College	6,917,000	11,217,000
223.	Medical College of Pennsylvania	8,153,000	10,765,000
224.	Fairleigh Dickinson University	10,873,000	10,637,000
225.	Suffolk University	not reported	10,635,000
226.	Albright College	8,419,000	10,501,000
227.	Stephens College[3]	9,227,000	10,471,000
228.	University of Rhode Island[4]	7,871,000	10,239,000
229.	Madonna College	7,996,000	9,582,000
230.	University of Evansville	8,121,000	9,361,000
231.	San Diego State University	7,151,000	9,167,000
232.	Utah State University	7,444,000	9,163,000
233.	Blackburn University	not reported	9,055,000
234.	Arizona State University	7,105,000	8,653,000
235.	Spring Hill College[3]	6,714,000	7,848,000
236.	Western Michigan University	5,411,000	7,559,000
237.	Augustana College	10,164,000	7,344,000
238.	Chapman College[3]	5,341,000	7,292,000
239.	Bellarmine College[3]	4,555,000	6,986,000
240.	University of Tampa[3]	5,970,000	6,723,000
241.	University of Medicine and Dentistry of New Jersey	6,572,000	6,612,000
242.	Interdenominational Theological Center	4,907,000	6,365,000
243.	Russell Sage College	5,450,000	6,212,000
244.	College of the Ozarks	4,962,000	6,148,000
245.	Monmouth College (N.J.)	4,751,000	6,130,000
246.	College of New Rochelle	4,156,000	5,456,000
247.	Mississippi State University	4,670,000	5,269,000
248.	St. John Fisher College[3]	4,234,000	5,049,000
249.	University of Massachusetts	4,078,000	5,001,000
250.	Mount Mercy College	3,959,000	4,872,000
251.	Rosemont College	3,296,000	4,323,000
252.	Saint Peter's College	2,084,000	2,971,000
253.	Kentucky Wesleyan College	2,049,000	2,664,000
254.	California Polytechnic State University at San Luis Obispo	not reported	2,260,000
255.	Memphis State University	1,094,000	2,206,000
256.	East Tennessee State University	1,615,000	2,200,000
257.	Ferris State College	1,155,000	2,169,000
258.	Plattsburgh College Foundation[6]	1,700,000	2,032,000
259.	Indiana University of Pennsylvania	1,260,000	1,433,000
260.	Nazareth College in Kalamazoo	1,025,000	1,098,000

Note: Table includes the top 260 institutions participating in the comparative-performance study by the National Association of College and University Business Officers.

[1] As of August 31, 1986

[2] As of September 30, 1986

[3] As of May 31, 1986

[4] As of March 31, 1986

[5] As of July 31, 1986

[6] As of December 31, 1985

Gifts to U.S. Charities Top $87-Billion; 82 Pct. from Individuals

Continued from Page 25

cent more than did income last year, according to the report.

Some of the increase in personal giving, the report said, could be attributed to the 50-per-cent deduction for charitable gifts made by individuals who did not itemize their income-tax returns. That deduction was eliminated in the tax-reform legislation and will not be available in 1987.

The report also cited the bull market in stock prices, "which fostered a feeling of affluence, which led some individuals to increase giving."

Bequests to charitable organizations grew at a record rate and reached an all-time high in 1986, accounting for 6.7 per cent of all giving.

The report said the increased competition for philanthropic dollars had led fund raisers to make a more concerted effort to secure bequests for their organizations.

An increase in the value of assets held by private foundations was responsible for the surge in their giving. The report said its survey of selected large foundations had found an increase of 21.8 per cent in the grant payments made by those funds in 1986, compared to an increase of 10 per cent in giving by the same philanthropies the previous year. Most of the foundations in the A.A.F.R.C. survey also reported an increase in the number of grants made.

Education Gets 16.8 Pct.

The report estimated that education received 16.8 per cent of all grant funds. "Higher education continues to be a priority area for the nation's largest foundations," the report said, "even though the proportion of foundation dollars and grants awarded to it is declining each year."

Colleges and universities also received foundation grants that are reported under other categories, such as science and social science. Grants in both of those categories were reported to have increased sharply in the past two years.

The 2.3-per-cent rise in contributions from corporations was the smallest increase in giving by any donor group. Sluggish profits, the effects of mergers and acquisitions, and changes in tax laws were cited as reasons for the slowdown in the growth of company giving.

The A.A.F.R.C. is an organization of major fund-raising consulting companies that specialize in helping charitable institutions plan and conduct large capital campaigns.

Copies of the 32nd edition of *Giving USA* are $32.50 prepaid and may be obtained from the A.A.F.R.C., 25 West 43rd Street, New York 10036.

—PAUL DESRUISSEAUX

40 Large Foundations Ranked by Grant Payments Made in 1986

	1985 grants	1986 grants	1986 assets
1. Ford Foundation	$121,093,820	$167,691,000	$4,758,862,000
2. Danforth Foundation	10,892,057	111,562,036	215,108,174
3. John D. and Catherine T. MacArthur Foundation	54,048,000	99,140,000	2,700,000,000
4. Pew Memorial Trust	70,191,500	90,595,500	1,550,025,174
5. W. K. Kellogg Foundation	69,481,205	74,599,862	3,108,333,370
6. Andrew W. Mellon Foundation	63,468,663	66,602,780	1,477,000,000
7. Lilly Endowment	26,985,856	56,585,286	1,913,568,000
8. Kresge Foundation	24,745,000	42,460,000	892,221,500
9. Rockefeller Foundation	36,717,781	41,014,606	1,614,820,987
10. San Francisco Foundation	38,319,906	40,572,863	617,518,839
11. Duke Endowment	42,916,039	40,032,726	797,610,073
12. Carnegie Corporation of New York	21,918,000	26,708,000	715,333,222
13. William and Flora Hewlett Foundation	29,852,400	26,295,222	568,753,000
14. Richard King Mellon Foundation	21,379,748	24,706,663	684,331,000*
15. Charles Stewart Mott Foundation	27,859,394	20,278,327	736,873,249
16. Gannett Foundation	16,491,000	19,227,241	577,000,000
17. J. Howard Pew Freedom Trust	27,444,700	19,155,000	331,201,764
18. Alfred P. Sloan Foundation	19,234,000	18,721,000	482,692,000
19. Cleveland Foundation	16,791,690	18,673,500*	415,000,000*
20. Bush Foundation	15,063,322	17,945,970	344,972,000
21. William Penn Foundation	19,116,000	15,026,000	421,173,000
22. J.E. and L. E. Mabee Foundation	15,494,100	14,955,556	264,284,586
23. Mabel Pew Myrin Trust	16,911,100	14,716,000	205,595,211
24. Edna McConnell Clark Foundation	14,169,000	14,005,000	348,044,000
25. Meadows Foundation	12,876,186	12,542,990	419,186,820*
26. Henry Luce Foundation	8,699,372	11,900,000*	224,887,000
27. Charles A. Dana Foundation	8,900,000	10,700,000	160,000,000
28. Alcoa Foundation	10,622,775	10,507,005	197,553,786*
29. John M. Olin Foundation	8,600,000	10,500,000	90,200,000
30. Robert A. Welch Foundation	9,587,132	10,434,957	238,229,120
31. Fred Meyer Charitable Trust	7,305,000	9,192,000	251,798,000
32. William R. Kenan, Jr. Charitable Trust	9,367,453	8,829,239	194,980,269
33. Sarah Scaife Foundation	8,102,500	8,567,000	173,216,883
34. Amon G. Carter Foundation	8,598,962	8,234,665	171,589,306
35. Howard Heinz Endowment	9,528,381	7,845,940	372,708,641
36. George Gund Foundation	6,133,050	7,179,922	228,500,000
37. Z. Smith Reynolds Foundation	7,515,928	7,141,141	150,533,922
38. Rockefeller Brothers Fund	6,899,369	6,820,024	220,000,000*
39. William Randolph Hearst Foundation	7,191,400	6,651,500	229,000,000
40. Vincent Astor Foundation	7,316,461	6,631,855	28,933,026
Total	$867,828,240	$1,225,168,386	$29,861,837,922

* Estimate

SOURCE: AMERICAN ASSOCIATION OF FUND-RAISING COUNSEL TRUST FOR PHILANTHROPY

Side-lines

Isiah Thomas had a prior engagement, so he sent his mom to graduate for him.

An explanation may be in order. Mr. Thomas is a star basketball player who left Indiana University six years ago to pursue a professional career with the Detroit Pistons.

He felt that the $1.4-million, four-year contract was too good to pass up, but his mother, Mary, was none too sure. She wanted Isiah, the last of the nine children she had raised alone in a Chicago ghetto, to become the first of her sons to get a degree.

Mrs. Thomas made her son promise that he would go back to college and graduate. But she wanted more than his word—so mother and son signed a legal agreement, drawn up by Mr. Thomas's agent.

In the intervening six years, Mr. Thomas took courses during the summer, through the mail, and at night. And although he still needs to complete one more course—he will do so this summer—he was scheduled to graduate last week from Indiana with a major in criminal justice.

Trouble was, Mr. Thomas couldn't attend the ceremony. He had something else to do—lead the Pistons in a playoff game against the Atlanta Hawks. So he asked his mother to represent him at graduation.

Mrs. Thomas was introduced at the ceremony by Indiana President John Ryan, who singled out Mr. Thomas and several other students to exemplify the variety of students graduating. Mrs. Thomas received a standing ovation from the collected students and parents.

Her son, meanwhile, won some accolades of his own. While his mother was accepting his diploma, Mr. Thomas was doing more than fulfilling his contract with his mother: He was winning a basketball game.

He sank a driving lay-up with one second left in the game to defeat the Hawks, 89-88.

Not a bad day.

•

The University of Maryland, trying to close the book on problems that have plagued it since last June, last week hired Lew Perkins, the athletic director at Wichita State University, to take the same job at Maryland.

Mr. Perkins takes over a department that has been in turmoil since last June's death of the star basketball player Len Bias from a cocaine overdose.

There were subsequent revelations about academic shortcomings among Maryland athletes, which led to the resignations last fall of the athletic director, Richard Dull, and Charles G. (Lefty) Driesell, the basketball coach.

At Wichita State, Mr. Perkins turned around a troubled athletic program that had been put on probation by the National Collegiate Athletic Association seven times, a record.

Athletics

43 Proposals to Cut College-Sports Costs on Agenda of Special NCAA Convention

Changes would limit seasons, scholarships, recruiting, and coaching staffs in virtually all sports

MISSION, KAN.

Members of the National Collegiate Athletic Association will vote on 43 proposed rule changes at a special convention in Dallas next month. The meeting, called by the association's presidents' commission, is aimed at finding ways to control the spiraling costs of intercollegiate athletics.

If passed, the cost-cutting proposals would affect almost all intercollegiate sports. They would reduce the lengths of playing and practice seasons, cut the number of scholarships, shorten recruiting periods, and limit the size of coaching staffs.

Relatively few new changes, however, are proposed for big-time college football, which already has limits in most of those areas. At most Division I-A institutions, football supplies a huge percentage of the athletic departments' income, and athletic directors and other officials have been reluctant to support cuts that might jeopardize that income.

Summaries of the 43 proposed rules changes in sports appear on Page 36.

Football Scholarships at Issue

The N.C.A.A. presidents' commission has proposed minor reductions in the length of spring football practice and in the number of football coaches in Division I-A, but backed away from supporting further limits on scholarships. Seven members of the Pacific-10 Conference, however, have proposed that the total number of football scholarships be cut from 95 to 90.

"The grant-in-aid reduction proposals are a major issue," Ted C. Tow, assistant executive director of the N.C.A.A., said last week.

A survey by the presidents' commission this year found that more than half the presidents at Division I-A institutions wanted to reduce the number of scholarships.

"If that holds," Mr. Tow said, "and the presidents cast or direct their vote, then I think you'll see a reduction. If they change their mind, or don't cast or direct their vote, then that could change."

Proposed Changes in Number of Athletic Scholarships in NCAA's Division I

Men	Current	Proposed
Baseball	13	12
Basketball	13	15
Cross-country, track	14	13
Fencing	5	4
Football	95	90
Gymnastics	7	6
Ice hockey	20	17
Lacrosse	14	12
Rifle	4	3
Skiing	7	6
Soccer	11	10
Swimming	11	10
Water polo	5	4
Wrestling	11	10
Women	**Current**	**Proposed**
Basketball	13	15
Cross-country, track	16	13
Fencing	5	4
Field hockey	11	10
Golf	6	5
Lacrosse	11	10
Skiing	7	6
Soccer	11	10
Softball	11	10
Swimming	14	12

SOURCE: NATIONAL COLLEGIATE ATHLETIC ASSOCIATION

Mr. Tow said there could also be a "major hassle" at the convention concerning spring football practice in Division I-AA. There are several proposals on the subject, including one backed by the presidents' commission that would eliminate spring practice in that division.

The presidents' commission is also seeking the association's support for a series of wide-ranging forums on major issues in intercollegiate sports over the next 18 months.

The commission is searching for a consensus among institutions on how far to carry reforms in athletics.

17 Roll-Call Votes

A group of institutions opposed to cuts in basketball scholarships imposed at last January's N.C.A.A. convention has offered a proposal to raise the maximum from 13 to 15, thus preserving the status quo. The N.C.A.A., however, says it will rule the proposal out of order, because it is not in keeping with the meeting's agenda, cost cutting.

Supporters of the change say they will appeal that ruling to the convention floor.

The special convention is the second called by the presidents' commission since its creation in 1983. The first, in June 1985, centered on academic matters and integrity in intercollegiate athletics. The commission has called for roll-call votes on 17 of the proposals, so that the positions of all member institutions will be on the record.

—CHARLES S. FARRELL

Trustees Alter SMU Governance; Campus Panel Backs Big-Time Sports

Governance

DALLAS

Southern Methodist University's Board of Trustees has unanimously approved a sweeping set of governance reforms designed to make the board smaller, more diverse, and more accountable, and to heighten the power and independence of the president.

The board's membership was cut to 40 from 71, and 23 long-time trustees resigned after the vote, acceding to a suggestion from the board's governance committee that trustees with 12 or more years of service step down.

Some of S.M.U.'s wealthiest supporters—including Edwin L. Cox, the former trustee chairman, and Robert S. Folsom, once mayor of Dallas—were among those who resigned.

Governance emerged as a key issue in the football scandal that has wracked Southern Methodist since November.

The Board of Governors, which had primary control over university affairs as the trustees' executive committee, was abolished in March, following an admission by Texas Gov. William P. Clements that he and other governors had agreed to phase out payments to football players rather than abolish them outright.

The new governance structure establishes an executive committee that cannot set policy; sets a limit of three four-year terms for trustees; and creates a 10-member trusteeship committee to monitor and evaluate trustee performance and nominate new board members.

Transformation Complete in 1988

The Board of Trustees will also include one outside professional educator as a voting member, and representatives of the faculty senate, student body, and alumni association as non-voting members.

University officials anticipate that the governance transformation will be completed by July 1988, when the South Central Jurisdiction of the United Methodist Church will elect a fully reconstituted board.

Campus reaction to the changes ranged from cautious optimism among faculty members to unbridled enthusiasm among the university's new leaders.

"It's an extremely positive step forward

Continued on Following Page

Campus Panel

DALLAS

A committee studying the role of Southern Methodist University sports last week recommended that the university remain in college athletics' most competitive division, as long as extensive safeguards are put into place—and vigorously enforced—to insure that the athletic department complies with rules of the university and the National Collegiate Athletic Association.

But a "minority opinion" offered by three of the committee's 10 members urged that the university drop out of the N.C.A.A.'s Division I into the less competitive Division III.

The comprehensive report, prompted by the athletics scandal that has plagued S.M.U. since November, is intended to fuel campus debate on the issue. It will be distributed to trustees, deans, faculty members, alumni, and interested students.

Committee members expect the report may be debated for several months before a decision is made on the future of sports at the university. That decision will be made by either the new president, who has yet

Continued on Following Page

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THE CHRONICLE
of Higher Education.

ISSN 0009-5982

June 10, 1987 • $1.95
Volume XXXIII, Number 39

News Summary

Articles on inside pages

Social scientists are trying to understand the social forces and behavior associated with the risk and spread of AIDS. Story on Page 7.

A group founded by Ralph Nader is raising money to support professors who it claims have been denied tenure for political reasons. Story on Page 13.

Scientists have become more willing and aggressive in working with the press. Story on Page 13.

Colored felt was the medium used to highlight the architectural detail of Williams Science Hall at the University of Vermont. Story on Page 20.

Budgets for public higher-education systems have generally fared only as well this year as their states' economies. Story on Page 22.

Donald S. Fredrickson has resigned as president of the Hughes Medical Institute. Story on Page 27.

College graduates are facing a more competitive job market this year. Story on Page 30.

The search that resulted in the naming of A. Kenneth Pye as the president of Southern Methodist University was meticulously planned. Stories on Page 35.

Student unrest at Spain's universities is expected to continue. Story on Page 37.

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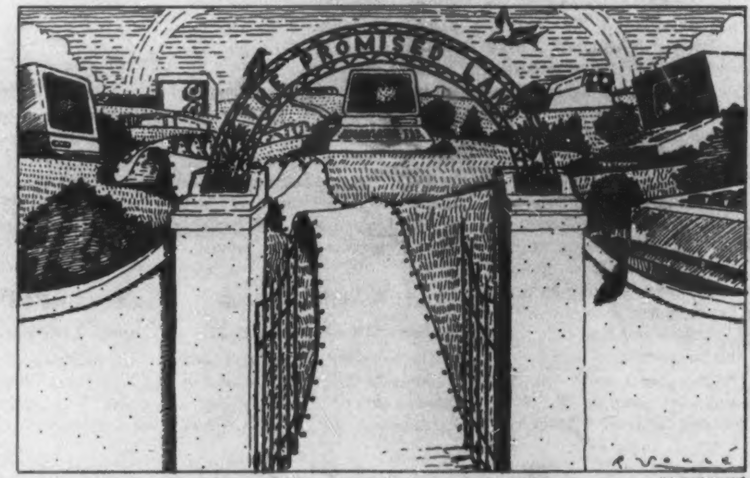
$3-BILLION A YEAR AND RISING

Computer Industry Sees Higher Education as Tough but Lucrative Market for Products



ROBERT SOULÉ

By JUDITH AXLER TURNER

Although their faculty and staff members may often believe otherwise, colleges and universities are a profitable market for the computer industry, as well as a prestigious one that offers long-term benefits.

Interviews with computer-company officials and a look at a soon-to-be-published survey of the higher-education market show that:

► Despite a combination of discounts and higher marketing costs that cut into their profit margins, computer companies make money on every machine sold to colleges and universities—often as much as they would make selling to customers in other markets.

► Colleges and universities can offer computer companies enough intellectual capital to make up for any diminished profits from their marketing efforts.

► Students take hardware and software preferences with them into jobs after college, influencing business purchases. The "get-'em-while-they're-young" approach works.

► Although higher education represents a small share of the national computer market, it is a potent force that influences what computer companies build and sell.

► Over the long run, higher education is a better market than almost any other because it is "refreshable," both with its need to have the latest equipment and with millions of new students coming into the system every year.

Student Purchases: $1-Billion

In 1986, higher education's computer purchases totaled $3-billion by most estimates—less than 1 per cent of the total $350-billion data-processing market.

Of that total, according to an internal study by one computer company, $2-billion represented sales to institutions. Forty per cent of those institutional purchases were for desk-top computers, 40 per cent for mid-size computers, and 20 per cent for mainframe and supercomputers.

The remaining $1-billion is the estimated amount of purchases by stu-

Continued on Page 18, Column 1

In an About-Face, Bennett Seeks to Curb Cutbacks

Fears White House proposals threaten his policy agenda

By ROBIN WILSON

WASHINGTON

In a dramatic political reversal, Education Secretary William J. Bennett is pressing the Reagan Administration to abandon its seven-year effort to reduce drastically the federal government's spending on education.

The Secretary believes that the Administration's proposals, which have included plans to cut spending on student aid by as much as 45 per cent, have alienated members of Congress and stymied his efforts to change education policy.

"People around the country embrace the Secretary's ideas, but when they start talking about dollars, they say we're Neanderthals," says Bruce M. Carnes, Deputy Under Secretary of Education. "Our ideas shouldn't become casualties to other policies."

Wants Reductions Under 10 Pct.

Secretary Bennett refused to discuss his new budget philosophy with *The Chronicle*. But his advisers say he has been pressing White House officials to call for a smaller decrease in education spending for fiscal 1989, which begins on October 1, 1988. That will be the last budget plan President Reagan will propose before his second term expires. The Secretary wants to keep the reductions under 10 per cent.

His advisers say that would give him room to request a boost in spending on Pell Grants, which go to the neediest students. It would also allow money for new programs to give colleges financial incentives for limiting tuition increases and to create special tax breaks for the money parents save for their children's college education.

Fiscal 1989 is nearly a year and a half away, and the Administration will not make its spending proposals for that year until January. But discussions about the general shape of the budget are already

Continued on Page 23, Column 2

Colleges Try New Techniques in Fierce Competition for Black Students

By MICHELE N-K COLLISON

HANOVER, N.H.

Kima Taylor is every college admissions officer's dream—a high scorer on the Scholastic Aptitude Test, a nationally recognized scholar, and a black woman.

Those facts made Ms. Taylor, who will graduate this month from Springbrook High School in Silver Spring, Md., one of the most sought-after black students in the country.

After sorting through the mountains of college brochures she received, Ms. Taylor narrowed her choices to Dartmouth College and Brown University.

On Easter weekend, Dartmouth invited Ms. Taylor and 90 other black students to visit Hanover. Over the three days, the visitors dined with the president, attended classes, and ate hamburgers at Occom Pond, a picnic site at the college.

Ms. Taylor also visited Brown, where she had been offered a place in the university's medical school through an early-admissions program. She decided to go to Dartmouth in part, she says, because the black students who served as hosts for the weekend "really made me feel special."

Successful Recruiting Tool

With the declining number of blacks going to college, institutions like Dartmouth and Brown have stepped up their efforts to recruit talented black students.

The Dartmouth weekend, called "Experience Dartmouth," has become one of its most successful recruitment tools. As many as 83 per cent of the students attending the weekend have enrolled in the college over the five years the program has been in existence.

But Dartmouth must compete with other institutions to encourage more black students to apply for admission. According to the American Council on Education, the proportion of college students who are black dropped from a high of 9.4 per cent in 1976 to 8.8 per cent in 1984.

The fiercest competition comes for black students like Ms. Taylor—students

Continued on Page 31, Column 1

FACT-FILE

Defense Funds to Colleges and Non-Profit Groups Total $2.6-Billion for 1986, Up 7.3 Pct. in a Year

Colleges, universities, and other non-profit organizations received $2.66-billion in Department of Defense contract funds in fiscal 1986—7.3 per cent more than the 1985 total of $2.48-billion.

The contracts were for research, development, testing, and evaluation for military projects and for civilian water-resource projects. The figures exclude funds for training and all contracts under $25,000.

Some 228 educational institutions and 82 other non-profit organizations were among the 2,429 Department of Defense contractors in fiscal 1986. Contracts with colleges and universities totaled $1.42-billion, while those with other non-profit organizations amounted to $1.24-billion.

Contracts with educational and other non-profit organizations accounted for 13.4 per cent of the $19.81-billion the Pentagon spent on research last year. The Massachusetts Institute of Technology, the top higher-education contractor, was the 14th leading contractor over all. The Johns Hopkins University ranked 17th among all contractors.

Listed below are those that had contracts of $500,000 or more.

	Amount
1. Massachusetts Inst. of Technology	$363,925,000
2. Johns Hopkins University	316,831,000
3. Mitre Corporation	306,593,000
4. Aerospace Corporation	301,781,000
5. Charles S. Draper Laboratory	237,515,000
6. Institute for Defense Analyses	57,438,000
7. IIT Research Institute	55,584,000
8. SRI International	54,433,000
9. University of Texas System	42,650,000
10. Rand Corporation	39,832,000
11. Pennsylvania State University	37,886,000
12. Stanford University	37,720,000
13. Battelle Memorial Institute	35,867,000
14. Carnegie Mellon University	35,594,000
15. University of California	35,361,000
16. Georgia Institute of Technology	34,096,000
17. University of Southern California	31,868,000
18. Scripps Institute of Oceanography	28,961,000
19. Hudson Institute	23,333,000
20. University of New Mexico	21,713,000
21. University of Dayton	20,829,000
22. University of Washington	20,103,000
23. New Mexico State University	18,367,000
24. Riverside Research Institute	18,022,000
25. Analytic Services, Inc.	17,009,000
26. Woods Hole Oceanographic Institution	15,436,000
27. University of Illinois	15,045,000
28. University of Maryland	13,415,000
29. Logistics Management Institute	13,136,000
30. Utah State University	11,626,000
31. Southwest Research Institute	11,139,000
32. Environmental Research Institute of Michigan	10,394,000
33. Columbia University	10,387,000
34. California Institute of Technology	9,833,000
35. Cornell University	9,476,000
36. University of Massachusetts	8,791,000
37. Massachusetts General Hospital	8,169,000
38. Harvard University	8,044,000
39. University of Florida	7,511,000
40. Princeton University	7,490,000
41. National Academy of Sciences	7,079,000
42. Research Triangle Institute	6,817,000
43. Southern Research Institute	6,759,000
44. University of Michigan	6,740,000
45. Brown University	6,125,000
46. University of Pennsylvania	6,119,000
47. Lawrence Livermore Laboratory	6,026,000
48. Salk Institute for Biological Studies	5,856,000
49. Purdue University	5,743,000
50. University of Wisconsin System	5,393,000
51. Texas A&M University System	5,264,000
52. University of Utah	5,136,000
53. State University of New York	5,118,000
54. Rensselaer Polytechnic Institute	4,941,000
55. Virginia Polytechnic Institute and State University	4,930,000
56. Auburn University	4,815,000
57. Boston University	4,804,000
58. North Carolina State University	4,792,000
59. Oregon State University	4,628,000
60. Southeastern Center for Electrical Engineering Education	4,549,000
61. Yale University	4,467,000
62. University of Rochester	4,421,000
63. University of Arizona	4,372,000
64. Ohio State University	4,106,000
65. University of Colorado	3,843,000
66. Brigham Young University	3,712,000
67. Case Western Reserve University	3,683,000
68. Polytechnic Institute of New York	3,502,000
69. Human Resources Research Organization	3,461,000
70. University of Miami	3,364,000
71. New Mexico Institute of Mining and Technology	3,358,000
72. University of North Carolina	3,284,000
73. Syracuse Research Corporation	3,217,000
74. Southern Methodist University	3,182,000
75. University of Iowa	3,114,000
76. University of Minnesota	$ 3,086,000
77. University of Pittsburgh	3,062,000
78. Mayo Foundation	3,028,000
79. Oklahoma State University	2,977,000
80. New York University	2,960,000
81. Northwestern University	2,934,000
82. Colorado State University	2,770,000
83. University of Rhode Island	2,680,000
84. Louisiana State University	2,678,000
85. Syracuse University	2,631,000
86. Arizona State University	2,466,000
87. University of Denver	2,385,000
88. Northeastern University	2,260,000
89. Duke University	2,232,000
90. Lehigh University	2,178,000
91. American Society for Engineering Education	2,156,000
92. Dartmouth College	2,006,000
93. California State University	1,932,000
94. Washington University (Mo.)	1,891,000
95. University of Virginia	1,855,000
96. University of Alabama	1,791,000
97. Florida State University	1,722,000
98. University of Kansas	1,651,000
99. Drexel University	1,646,000
100. Catholic University of America	1,641,000
101. Georgetown University	1,624,000
102. Wentworth Institute of Technology	1,606,000
103. University of Connecticut	1,600,000
104. Kestrel Institute	1,583,000
105. Clemson University	1,565,000
106. Stevens Institute of Technology	1,561,000
107. Emmanuel College	1,493,000
108. University of Missouri	1,473,000
109. University of Hawaii	1,451,000
110. Michigan Technological University	1,450,000
111. Michigan State University	1,443,000
112. San Diego State University	1,424,000
113. Texas Tech University	1,411,000
114. Boston College	1,377,000
115. University of Chicago	1,210,000
115. University of Delaware	1,210,000
117. Palisades Institute for Research Services	1,192,000
118. Virginia Commonwealth University	1,182,000
119. University of Tennessee	1,164,000
120. Rutgers University	1,156,000
121. Baylor University	1,124,000
122. Clarkson University	1,067,000
123. University of Cincinnati	1,043,000
124. Vanderbilt University	1,026,000
125. Rice University	1,024,000
126. Colorado School of Mines	966,000
127. City University of New York	926,000
128. University of Oklahoma	888,000
129. University of Kentucky	871,000
130. Thomas Jefferson University	825,000
130. University of Houston System	825,000
132. University of Lowell	803,000
133. University of Georgia	794,000
134. George Washington University	789,000
135. Mississippi State University	787,000
136. Washington State University	775,000
137. University of Notre Dame	718,000
138. Wright State University	704,000
139. Medical College of Georgia	701,000
140. University of Mississippi	699,000
141. North Texas State University	679,000
142. Wayne State University	640,000
143. San Jose State University	608,000
144. American Institute of Biological Sciences	607,000
145. Kansas State University	591,000
146. Tuskegee University	582,000
147. Morgan State University	574,000
148. University of Indiana	563,000
149. Oregon Health Sciences University	546,000
150. Tufts University	529,000
151. Franklin Institute	501,000
152. Atlanta University	500,000
152. Midwest Bio-Laser Institute	500,000

SOURCE: U.S. DEPARTMENT OF DEFENSE

Education Dept. Regains $10-Million in Federal Funds that Were Misused

WASHINGTON

The Education Department has asked Florida Memorial College to refund $294,000 in Pell Grant money that the college said it had given to residents of a convalescent home—including some people who had already died.

Twenty-six residents were enrolled in extension classes sponsored by the college but were ineligible for federal aid because they were not working toward degrees.

That was one of dozens of cases investigated by the Education Department's Office of Inspector General during the first half of fiscal 1987, which ended March 31. The department's auditors and investigators recovered $10.6-million during that period, and the investigations resulted in 45 indictments and 54 convictions.

The amount misused is only a small fraction of the agency's $19.5-billion budget for fiscal 1987.

The office is required to make semiannual reports to Congress of its audits and investigations.

Many of the cases detailed in the most recent report involved students and college officials who submitted false information on aid applications in order to receive funds they were not supposed to get. In some cases, students understated their income on aid applications. In other instances, college officials certified aid money for students who either were not in attendance at the college or didn't qualify, and then kept some of the aid.

Capitol Hill Update

1987 Spending. The Senate last week approved a bill that would provide $287-million more in the present fiscal year for Pell grants, which go to low-income students, and more than $20-million for special projects at three universities.

The Senate now must try to reach a compromise on the supplemental spending bill for fiscal 1987 with the House of Representatives, which has passed a different version of the bill.

Both bills, however, provide the same amount for Pell Grants.

The Senate bill includes money for equipment and research at Louisiana State University, a new research facility at North Dakota State University, and a computerized information service at Iowa State University.

National Science Foundation. The National Science Foundation would be allowed to receive an increase for fiscal 1988 of nearly 17 per cent—the amount President Reagan requested—if a bill passed by the House last week becomes law.

The bill, passed 408 to 3, would allow up to $150-million for the science and engineering education office of the foundation—about $35-million more than the Administration requested.

It would direct the foundation to devote half of its money for new engineering-research centers to research projects on manufacturing technologies.

That provision has been controversial, with critics contending that such specific instructions represent a move toward "pork-barrel science" and would allow proposals of lesser quality to be supported over others that did not involve manufacturing technologies.

The bill would only extend the authority of the foundation and set spending ceilings for it. Another bill, which must go through the spending committees in both houses, is needed to provide the actual money.

The Senate Labor and Human Resources Committee last week passed its version of the bill to extend the foundation's authority, which would also allow an increase of up to nearly 17 per cent.

It would also create a new program for renovating and repairing campus research facilities. Up to $1-million would be available next year for the N.S.F. to plan the new program. In fiscal 1989, up to $47-million would be available for the program; in fiscal 1990, up to $95-million.

The Senate bill would provide about $10-million more for the science education office than the President requested.

The bill would extend the authority of the science foundation for five years.

Riders: The Senate Labor and Human Resources Committee last week sent to the full Senate the nomination of Bonnie Guiton, currently a member of the Postal Rate Commission, to be Assistant Secretary for Vocational Education at the Department of Education . . . The Ways and Means Subcommittee on Oversight last week announced new dates for its hearings on the federal tax status of moneymaking activities operated by non-profit groups, including colleges and universities. Hearings will be held on June 22, 26, 29 and 30.

In Federal Agencies

Data collection. The following agencies have submitted lists of their data-collection requests to the Office of Management and Budget for review: Department of Agriculture (*Federal Register*, May 28, Page 19,900); National Endowment for the Arts (*Federal Register*, May 28, Page 19,940); Education Department (*Federal Register*, May 29, Pages 20,138-9); Department of Defense, General Services Administration, and National Aeronautics and Space Administration (*Federal Register*, June 2, Pages 20,635-6).

Government records. The National Archives and Records Administration has issued final regulations governing public use of records that have been preserved on microfilm (*Federal Register*, May 29, Pages 20,077-83).

Health professions. The Public Health Service has issued final regulations that change several requirements for individuals seeking aid under the Health Professions Student Loan program, as called for by the Health Professions Training Assistance Act of 1985 and the Nurse Education Amendments of 1985 (*Federal Register*, June 3, Pages 20,906-8).

Health professions. The Public Health Service has proposed changing the definition of "exceptional financial need" that is used to determine the eligibility of certain students seeking aid, as required under the Health Professions Training Assistance Act of 1985. Comments from the public must be received by July 20 (*Federal Register*, June 3, Pages 20,989-92).

Records disposal. The National Archives and Records Administration has published a list of federal agencies' requests to dispose of records or shorten the period during which the records will be kept (*Federal Register*, June 3, Pages 20,793-4).

Student aid. The Food and Nutrition Service has issued an interim rule that would change regulations used to determine whether students seeking federal educational assistance are also eligible for aid under the Food Stamp Program. As required by the Higher Education Act of 1986, federal educational assistance may not be considered as extra income in the process of determining eligibility for other federal aid. Comments from the public must be received by July 31 (*Federal Register*, June 1, Pages 20,376-80).

Veterans' training. The Veterans Administration has proposed changing the administrative procedures used to review training programs for veterans. Comments from the public must be received by June 26 (*Federal Register*, May 28, Pages 19,890-1).

6/18/87 C2175-1

THE CHRONICLE
of Higher Education.

ISSN 0009-5982

June 17, 1987 • $1.95
Volume XXXIII, Number 40

News Summary

Articles on inside pages

A university could be taken to court if a product designed by one of its researchers harms someone. Story on Page 4.

Seven institutions are up for censure by the A.A.U.P., following failed attempts by the association's Committee A to settle disputes on those campuses. Stories on Page 10.

Higher education's efforts to regain benefits curtailed under the new tax system have received a significant setback. Story on Page 15.

A Harvard professor who is a prominent black conservative has withdrawn his name from consideration for the No. 2 post in the Education Department. Story on Page 20.

Fund-raising programs at 35 colleges, universities, and private secondary schools have won awards. Story on Page 25.

The Prince of Handcuffs paid his way through college by performing magic tricks at Milwaukee bars. Story on Page 27.

The director of athletics at the University of Virginia has been chosen to be the new executive director of the N.C.A.A. Story on Page 29.

The failure of doctoral students to complete their theses can be blamed largely on the universities, according to a forthcoming report. Story on Page 31.

Canada needs a wider range of academic institutions, according to the president of the Canadian Institute for Advanced Research. Story on Page 31.

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Proposal to Reduce Sports Scholarships Assailed as Unfair

Women, blacks seen affected unduly; critics call for delay

By DOUGLAS LEDERMAN

Cuts in athletic scholarships proposed by the National Collegiate Athletic Association's presidents' commission would unfairly affect female and minority athletes and should be deferred, critics say.

The commission's proposed reductions, which would affect most non-revenue sports but spare big-time football, will be considered by the N.C.A.A. membership at a special convention on June 29-30 aimed at containing the costs of intercollegiate sports.

In recent weeks, attacks on the scholarship cuts have come from diverse camps:

► Donna Lopiano, women's athletics director at the University of Texas at Austin, has issued a statistical analysis indicating that women's scholarships would suffer a 10.4-per-cent cut, while men's grants would be cut only 6.1 per cent.

► The American Association of University Professors has sent a letter to college presidents calling the cuts "disturbing" in their exaggerated effect on female athletes and their "inevitable" limiting of minority presence on campuses.

► Christine H. B. Grant, women's athletics director at the University of Iowa, has issued a report criticizing the cuts' impact on minority athletes. She says the reductions would contribute to creating an "alarming situation for minority students in higher education."

All three documents urge the N.C.A.A. to delay action on the proposed reductions until the issue is more carefully studied,

Continued on Page 30, Column 1

Excerpts from "Agenda for Reform," a policy paper by the presidents' commission of the N.C.A.A., appear on Page 30.

HOW DO FILMS PORTRAY PROFESSORS?

MOVIE STAR NEWS

A session at this week's meeting of the American Association of University Professors will consider that question. Above, Elizabeth Taylor and Richard Burton in "Who's Afraid of Virginia Woolf?" Story on Page 11.

Recent Breakthroughs in Superconductivity Lead to Rush for Commercial Applications

By KIM McDONALD

Recent developments in superconductivity have led to a revolution of sorts on some university campuses, as faculty members rush to create companies and research centers to help them produce commercial applications for their newly created superconductors.

At the Massachusetts Institute of Technology, Stanford University, and the University of Houston, where some of the new commercial ventures and collaborations are starting up, the excitement resembles the entrepreneurial atmosphere of the early 1970's, when faculty members were launching profitable companies based on developments in biotechnology and semiconductors.

High-temperature superconductors, the latest technological breakthrough to lure venture capitalists, can transmit electricity with no resistance or loss of energy when cooled to moderately low temperatures.

Conventional superconductors have had only limited application because they required temperatures near absolute zero—minus 459 degrees Fahrenheit—to produce a resistance-free flow of electricity.

But scientists now believe that high-temperature superconductors—unusual black ceramics that were discovered only a year ago—can be made to operate at room tem-

Continued on Page 4, Column 2

Fired W.Va. Chancellor Gets the Last Word

Leon H. Ginsberg, fired last year as West Virginia's chancellor of higher education, has written an unusually candid report on his experiences. Story on Page 15.

A Weird Year in College Admissions Leaves Officials Groping for Explanations

By MICHAEL W. HIRSCHORN

Enid McKenna calls it "mass confusion."

A colleague says: "It's really a puzzle."

Olga Euben thinks it might have something to do with the moon's cycle, or maybe the tides, or possibly hormonal cycles.

"You know, in some study they found when people are working in factories together that they get the same hormonal cycles," she says. "Maybe there's a hormonal surge going through the high schools."

Guidance counselors and admissions officers are seeking an explanation for what has, by all accounts, been a most unusual year in college admissions.

The year in which most people in the admissions field had expected a projected drop in the number of 18-year-olds to depopulate college classrooms became, instead, the year in which colleges around the country were deluged with sometimes record numbers of applications.

From the smallest liberal-arts institutions to the biggest state universities, colleges were reporting application increases as high as 60 per cent.

Mounting Uncertainty

At Swarthmore College, applications were up 35 per cent. At Hampshire College, applications were up a staggering 55 per cent. At Eckard College in Florida, the increase totaled 40 per cent. Applications to Virginia Wesleyan College shot up 57 per cent. Colby College in Maine reported a 19-per-cent increase in the number of students accepting admission to its class of 1991. The University of Connecticut, which boasted a 13-per-cent jump in applications, reported this spring that for the first time in memory it had a waiting list of 400 qualified students.

At Pennsylvania State University, applications were up 9 per cent and, says one official, the admitted students were more qualified than ever before. Other large state institutions reported similar increases in the number and quality of applicants.

On the surface such figures should be and were causes for celebration at many

Continued on Page 28, Column 1

The Questions About Reform that NCAA Presidents' Commission Hopes to Answer

MISSION, KAN.

Following are excerpts from a policy paper prepared by the presidents' commission of the National Collegiate Athletic Association. The paper is designed to set the stage for national forums on the reform of intercollegiate sports that will begin at the association's convention this month in Dallas. The commission hopes that the forums, along with several proposed studies, will help colleges resolve some of their basic differences over how much reform is needed in big-time sports.

National Forums

We envision that the Dallas dialogue will give rise to questions which require further discussion and analysis. We therefore intend that the N.C.A.A. will stage, on behalf of the presidents' commission, special national forums to discuss such critical questions as these:

► How can athletics contribute to the quality of student-athletes' lives? Should the educational experience of student-athletes be substantially comparable to that of their nonathlete peers?

► On what basis should athletics-related financial aid be awarded? Should it differ from financial aid awarded to other students?

► What practice and competitive calendars and schedules will best serve student-athletes' educational and social experiences?

► Would limits on freshman eligibility enhance student-athletes' educational and social experiences?

► How can publicity, revenue, and competitive success contribute to, rather than detract from, honor and honesty in athletics? Should ways be devised to control the commercialization of big-time sports?

► What competitive structures best serve both to promote diversity among institutions and to unify, rather than divide, institutions? Should the existing divisional structure be changed?

Studies of Intercollegiate Athletics

In order to ensure that the national forums on intercollegiate athletics are based on sound information, we will sponsor a series of comprehensive studies that will give solid, broad and persuasive evidence as to the effects of participation in intercollegiate sports on the student-athlete and on colleges and universities. These studies will address, among others, the following questions or issues:

► How do the experiences of college and university life of student-athletes compare with those of other students, in general, and with those of other students who devote a great deal of time to a particular extracurricular activity?

► How do the experiences of student-athletes differ depending upon whether one is a participant in big-time sports or in sports that are not given a heavy emphasis?

► How do the experiences of student-athletes compare with that of other students in terms of courses taken, classes attended, time spent on or off campus, tutoring received? How do they feel about and evaluate their experiences? Do they see themselves as beneficiaries of fine programs, or as exploited? How do they personally experience the balance between athletics and academics in their daily lives?

► How are student-athletes recruited? How do recruitment activities differ depending upon the intensity of the athletic program? What are the differences in test scores and grade-point averages between athletes and other students? How do recruited students personally experience the process of choice of college and university and the role of athletic recruitment in that process?

► What are the end results of college and university athletic programs? What are the graduation rates of various types of students and programs? How do student-athletes evaluate their college experiences as they come to an end? What do their lives look like three and four years after they leave college?

► What effects do intercollegiate athletic programs have on the life of the colleges and universities, as distinct from their effects on individual athletes? For example, do big-time sports increase alumni giving? Do they contribute to campus morale? Do they provide important ties to alumni?

► What effects do revenue producing and revenue sharing arrangements have on the structure and character of intercollegiate athletics? What impact do these arrangements have on student-athletes, on competitive schedules, on institutions?

► What are the links between intercollegiate athletics and professional sports? What effects do these links have on student-athletes and their colleges and universities?

Plan to Reduce Sports Scholarships Assailed as Unfair to Women and Blacks

Continued from Page 1

and until other avenues for cost-cutting are explored.

"I find it a little absurd that the first cost-cutting measures are those aimed at scholarships, which hurt the kids," says Ms. Lopiano. "There are football teams spending hundreds of thousands of dollars on recruiting, and we're wiping out opportunities for women and minority athletes?"

Ted C. Tow, assistant executive director of the N.C.A.A., says the presidents' commission was aware of those concerns when it recommended the legislation in April.

"The fact that the committee sponsored the cuts even having heard the argument is a pretty good indication they support them," he says.

Chancellor John C. Slaughter of the University of Maryland at College Park, chairman of the presidents' commission, could not be reached for comment last week.

Equal Reductions Attempted

The commission announced in April that it was attempting to cut men's and women's sports by equal amounts, or to roughly equal levels. In Division I cross-country and track and field, for example, men's scholarships would be cut to 13 from 14, while women's grants would be dropped to 13 from 16.

Overall in Division I, the proposed cuts would slash 15 scholarships from 12 men's sports and 14 scholarships from 10 women's sports.

The proposed scholarship reductions would affect institutions in all N.C.A.A. sections except Division III, the association's least-competitive section, which prohibits athletic scholarships.

Cuts Rejected in Football

In football, scholarship cuts are proposed in Division I-AA and Division II. The presidents' commission rejected such reductions in top-ranked Division I-A, but members of the Pacific-10 Conference have introduced a separate proposal to lower the number of football players on scholarships from 95 to 90.

Ms. Lopiano contends that cutting an equal number of scholarships from men and women is automatically discriminatory because the number of women's scholarships already lags far behind the number for men.

The 15 men's cuts would come from a total of 245 scholarships in 17 sports, while the 14 women's cuts would come from a total of only 135 in 13 sports, thus cutting women's scholarships by a substantially higher percentage, she notes.

The percentages are skewed even more at individual institutions in Division I-A, says Ms. Lopiano, because no single college offers all N.C.A.A. sports and because more than half the men's scholarships are awarded in football, which is not likely to be cut at all.

Percentage of Scholarships that Would Be Eliminated

Conference	Men	Women
Atlantic Coast	2.4%	11.5%
Big East	6.0%	11.1%
Big Sky	1.8%	8.5%
Big 8	3.4%	10.0%
Big 10	3.4%	8.5%
Mid-American	3.7%	9.5%
Ohio Valley	0%	10.2%
Pacific-10	3.4%	9.5%
Southeastern	1.9%	10.0%
Southland	5.8%	10.0%
Southwest	1.9%	11.6%

SOURCE: DONNA LOPIANO, U. OF TEXAS AT AUSTIN

For example, each institution in the Southwest Conference, in which Texas participates, now offers 156 scholarships in seven men's sports and 69 scholarships in seven women's sports. The proposed reductions would cut just three scholarships from the conference's men's teams, but eight from the women's teams. That amounts to a 1.9-per-cent cut in men's sports and an 11.6-per-cent cut in women's sports. According to Ms. Lopiano's figures, every Division I-A conference will cut women's scholarships by at least 4 more percentage points than men's.

Ms. Lopiano insists that if scholarship cuts are necessary at all—and she maintains that they may not be—they should be imposed as an across-the-board percentage cut that would truly affect men's and women's sports equally.

Impact on Minority Students

The A.A.U.P.'s letter to presidents, proposed by the association's committee on the status of women in academe, raises the issue of unfair impact on minority students. It argues that athletic scholarships have historically provided a ready source of academic opportunity for blacks, and that cutting such grants will reduce the presence of minority groups on campuses.

The report by Ms. Grant of Iowa makes much the same point. The proposed reductions discriminate against minority athletes, she argues, because the largest cuts will come in track and field, in which blacks often excel. She finds that fact especially troublesome when considered alongside recent cuts in men's and women's basketball, in which black athletes also predominate, and the high proportion of blacks among those excluded by the recent imposition of higher academic standards for freshman athletes.

None of the critics accuse the N.C.A.A. or the presidents' commission of purposeful discrimination. But they do suggest that the presidents acted too hastily, without considering the full impact of their actions.

"It seems like they came in with two notions: Don't cut football, and make cuts in men's and women's sports equally," says Ms. Lopiano. "I'd like to give them the benefit of the doubt, and just assume that they thought it was the most sensible thing to do, and just didn't think it would be that big a deal.

"But in the process," she adds, "they may discriminate against two groups, whether they meant to or not."

Delay Urged by AAUP

The A.A.U.P. letter urges the presidents' commission to delay action on the cuts, and to consider them further within the context of the commission's national forum, which will get underway at the special convention in Dallas later this month and continue through next year.

James J. Whalen, president of Ithaca College and the presidents' commission's Division III chairman, acknowledges that the proposed cuts deserve further scrutiny. "Any time you come up with legislation, you may find out later that it does some things you might not expect," he says. "We need to look at this, and nothing should be written in stone."

6 Named to Respond to Major Speakers at NCAA's Forum on Reform of Sports

MISSION, KAN.

Two university presidents, a faculty member, an athletic director, a women's athletic director, and a head football coach have been named by the National Collegiate Athletic Association's presidents' commission to respond to the four major speakers at the national forum on sports reform at the N.C.A.A.'s special convention this month.

The respondents will be: Raymond Burse, president of Kentucky State University; Eugene F. Corrigan, athletics director at the University of Notre Dame; Kenneth H. Keller, president of the University of Minnesota at Twin Cities; Donna Lopiano, women's athletics director at the University of Texas at Austin; G. E. (Bo) Schembechler, football coach at the University of Michigan; and D. Alan Williams, faculty athletics representative at the University of Virginia.

They will respond to the university presidents and chancellors chosen as the forum's major speakers. The four, named earlier this month, are Anthony F. Ceddia, president of Shippensburg (Pa.) University; Ira Michael Heyman, chancellor of the University of California at Berkeley; Frank E. Horton, president of the University of Oklahoma; and Richard Warch, president of Lawrence University.

People in Athletics

Herb Appenzeller, athletic director at Guilford College, has retired.

Jackie Carringer, women's gymnastics coach at Boise State U., has resigned.

Richard J. Cook, assistant football coach at Santa Barbara City College, to coach.

Chris Dittman, athletic director at Regis College (Colo.), has resigned.

Ron Elliott, football coach at North Park College, has resigned.

Tom Fallon, men's tennis coach at College of Notre Dame, has retired.

Sharon Fanning, women's basketball coach at U. of Tennessee at Chattanooga, to women's basketball coach at U. of Kentucky.

Craig Fouhy, director of admissions at North Park College, to football coach.

Alan Goodyear, men's soccer coach at Rensselaer Polytechnic Institute, has retired.

Terry Hall, women's basketball coach at U. of Kentucky, has resigned.

Frank Helies, men's swimming coach at U. of New Hampshire, has resigned.

William Kalbaugh, men's golf coach at Rensselaer Polytechnic Institute, has retired.

Christopher Kristich, men's basketball coach at Frederick Community College, to men's basketball coach at U. of Pittsburgh at Johnstown.

Don Larson, football coach at Illinois Wesleyan U., has retired.

Clarence Lephart, men's and women's swimming coach at Rensselaer Polytechnic Institute, has resigned.

Marty Marbach, assistant men's basketball coach at Villanova U., to men's basketball coach at Canisius College.

Dennis Martel, assistant baseball coach at Illinois Wesleyan U., to baseball coach.

Pamela Martin, assistant women's basketball coach at U. of San Francisco, to women's basketball coach at Humboldt State U.

Sherri Mattson, women's basketball coach at Bemidji State U., has resigned.

Mary McDonald, assistant women's basketball coach at U. of Wyoming, to women's basketball coach at Bemidji State U.

Muffet McGraw, women's basketball coach at Lehigh U., to women's basketball coach at College of Notre Dame.

Kevin McHugh, assistant athletic director at Bowling Green State U., to athletic director at Trenton State College.

Ed McLean, assistant men's basketball coach at North Carolina State U., to men's basketball coach at Samford U.

Ron Oestrike, baseball coach at Eastern Michigan U., has resigned.

Andy Piazza, men's basketball coach at Delta College, to men's basketball coach at Indiana U.–Purdue U. at Fort Wayne.

Alan R. Platt, assistant athletic director at College of William and Mary, to athletic director at Guilford College.

Seth Roland, men's soccer coach at Christopher Newport College, to men's soccer coach at U. of Bridgeport.

Jerry Schemmer, men's basketball coach at Nebraska Wesleyan U., also to athletic director.

Paul Shoults, athletic director at Eastern Michigan U., has retired.

Fremont Smith, assistant men's basketball coach at Portland State U., to men's basketball coach at California State U. at Chico.

Bob Stanclift, women's softball coach at U. of Kansas, has resigned.

Marianne Stanley, women's basketball coach at Old Dominion U., to women's basketball coach at U. of Pennsylvania.

Robert G. Surette, assistant men's soccer coach at Keene State College, to men's soccer coach at College of the Holy Cross.

Thom Turchiano, men's and women's swimming coach at U. of California at Riverside, has resigned.

Danny White, baseball coach at Virginia Military Institute, has resigned.

6/24/87 C2175-1

THE CHRONICLE

of Higher Education.

ISSN 0009-5982

June 24, 1987 • $1.95
Volume XXXIII, Number 41

News Summary

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The controversial theology of the Rev. Charles Curran comes out of a "revisionist" movement among Catholic moralists. Story on Page 4.

Conservatives are again donating money to establish free-enterprise professorships. Story on Page 10.

The official Fool of the University of Colorado ferrets out pomposity on the campus. Story on Page 11.

The New York Legislature has voted to require testing companies to provide detailed data about students' performance. Story on Page 17.

A House-Senate committee has approved a budget plan that would allow federal spending on education to rise by as much as $2.2-billion. Story on Page 17.

State budget officers for higher education are often forced to reconcile politics and reality. Story on Page 17.

Universities are joining a growing number of philanthropists who guarantee middle-school students tuition for college. Story on Page 29.

Many sports officials doubt that the special N.C.A.A. convention will achieve anything. Story on Page 31.

Virginia's Governor has rebuked Virginia Tech trustees for endorsing big-time sports at the university and risking involvement in scandal. Story on Page 31.

Israel is considering a major overhaul of its higher-education system. Story on Page 33.

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WIDE WORLD

Korean Campuses Close as Protests Intensify

Anti-government student demonstrators in Seoul flee in panic when police tear-gas grenades explode in the midst of their sit-in. Story on Page 33.

Citizens' Campaigns Are Foiling State Plans to Shut Down or Merge Public Colleges

By SCOTT JASCHIK

Aggressive campaigns by small groups of citizens have made it all but impossible for a state to close or merge public colleges. As a result, many officials complain, parochial interests often triumph over the needs of the state as a whole.

Such controversies tend to follow the same scenario:

With the state facing a financial crisis, the governor, the state higher-education board, or a study commission proposes to close a college. Quickly, protests erupt. Dramatic symbolism is everywhere (coffins with the name of the institutions under consideration to be closed are *de rigueur*). Bowing to public pressure, legislators reject efforts to shut down the institution and grab the credit for "saving" it.

Supporters of the college involved say their victory demonstrates that democracy really works. But many state officials and other higher-education observers are more and more frustrated by the pattern. The protests, they say, have made the higher-education planning process more political and less logical.

In addition, they say, legislators who reject proposals to close institutions frequently lose interest in higher education once the closing has been averted, and rarely make much effort to see that funds are available to operate the colleges they "rescued."

In the past three years, major plans for

Continued on Page 20, Column 1

AT&T and Phone Companies Give More to Colleges

The breakup of the Bell system has brought changes in grantmaking. One beneficiary: higher education. Story on Page 25.

Thatcher's Re-Election Likely to Bring an End to Tenure in Britain

By DAVID WALKER

LONDON

The resounding re-election of Margaret Thatcher's Conservative government this month may have sounded the death knell for Britain's system of academic tenure.

A legislative initiative to abolish career-long tenure is expected to be published soon, perhaps before the end of the month.

The measure also would radically change the mechanism by which government grants are paid to universities. The bill would replace the University Grants Committee, an autonomous advisory body whose members come mostly from academe, with a Universities Funding Council that would have strong representation from business and be controlled directly by government ministers.

The proposals are intended to fulfill Prime Minister Margaret Thatcher's de-

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Give & Take

When students talk, some alumni evidently listen. That may explain why more and more universities are asking students to participate in fund-raising phonathons.

At the University of Michigan, students have called 97,000 alumni and raised $8.3-million since September. Over 1,700 people have pledged $1,000 or more.

Calls are made at a campus phone center that features a bright setting, a support staff, and 50 telephone lines on separate desks.

The university is trying to dial all 309,000 of its graduates and raise $14.5-million by phone by June 1988.

▪

So many fingers have been doing so much walking at Rutgers, the State University of New Jersey, that fund raisers there have created a Phonathon Hall of Fame.

At Rutgers's most recent telephone event, 1,200 volunteers in eight cities called nearly 20,000 alumni and raised $1.2-million.

Kenneth Tjaden, a former Rutgers trustee, may have been the phonathon's fastest talker: He raised $217,000 and became the hall's first inductee.

▪

Giving and swimming are newly linked at Hood College. A 1987 Hood graduate, Kathleen King Kinsey, plans to donate money every time one of her swimming records is broken. Since she has set 17 records, those gifts could add up.

Just how much Ms. Kinsey will give will depend on long each record stands and by how many tenths of a second it is broken. "If a swimmer knows she is not only changing a mark, she is also earning something for the athletic department, maybe her record will mean even more," she says.

Ms. Kinsey also hopes to start a tradition. "I hope that when someone comes along and retires my record, she will give to Hood, too."

▪

Some scholarship winners may become donors at Duke University. John W. Rollins, the chairman and chief executive officer of a large trucking and transportation corporation, has put a new twist on a $250,000 gift to Duke's business school.

The gift will create scholarships for students who have demonstrated outstanding academic achievement and leadership during their first year in business school.

Each award will provide $5,000 in cash and $5,000 as a low-interest loan to be repaid within three years of graduation.

The twist: scholarship recipients must agree to give to the school after they earn their degrees.

Said Thomas F. Keller, the business school's dean: "We want to encourage students to be aware of the long-term benefits of their education and of the need to be supportive of future generations."

Philanthropy

Grantmaking by Telephone Companies Shuffled Following Bell System Breakup

AT&T brings greater sophistication to philanthropy; 5 regional companies have formed foundations

By ANNE LOWREY BAILEY

NEW YORK

These days, when the American Telephone and Telegraph Company makes a charitable donation, it doesn't reach out and touch just anyone.

Since January 1, 1984—the date on which A.T.&T. officially divested itself of seven regional operating telephone companies and plunged into the largest corporate re-organization in world history—the corporation has awarded fewer and larger grants.

More and more, A.T.&T.'s dollars are going to higher education.

This year, colleges and universities will claim 47 per cent—$13-million—of the A.T.&T. Foundation's budget, up substantially, as a percentage, from 32 per cent of the contributions made by the corporation in 1983, the year before divestiture.

While the foundation's $27.7-million budget is enough to make A.T.&T. one of the 15 largest corporate contributors of 1987, it falls far short of the $69.6-million contributed by the entire Bell telephone system in 1983.

PHOTOGRAPH FOR THE CHRONICLE BY DON HAMERMAN

AT&T's Reynold Levy (with Anne Alexander): "We are trying to lend a sort of energetic coherence to our rich material and human resources."

Collaboration Is Forbidden

Whether the eight new corporations are as generous as Ma Bell used to be is as hard to read as a phone bill.

Since divestiture, no one has officially calculated aggregate contributions by regional and local phone companies, whose donations were included in the old Bell system totals. That's because A.T.&T., the regional holding companies, and the local telephone subsidiaries are forbidden by law from collaborating with one another.

Nonetheless, five of the seven "Baby Bells" have formed grant-making foundations, and a sixth, Bell Atlantic, is exploring the idea. The seventh company, U.S. West, has decided not to create a foundation but does have a healthy contributions program.

Those foundations have at least $139-million in assets. A tabulation by *The Chronicle* indicates that the regional companies gave nearly $93-million to charity in 1986. Added to the $30-million given by A.T.&T. itself that year, that is $53-million more than the consolidated Bell system gave away the last year before divestiture.

Roughly 25 per cent of that total went to higher education.

Phone-company contributions officers say the foundations, which are so new that none has completed more than two grant-making cycles, have been formed to protect contributions budgets from earnings fluctuations in a "volatile" business environment.

A State of Shock

In addition, A.T.&T.'s metamorphosis from the nation's largest utility (with over one million employees) to a simple little Fortune 500 corporation, 300,000 strong, and the parallel growth of regional and local companies has left contributions officers at many phone companies in a state of shock. The answers, "That hasn't been decided yet," or, "That's changing," are frequent refrains.

The changes are taking their toll on the A.T.&T. Foundation itself: Its budget this year is $2.2-million less than it was in 1986. Says Reynold Levy, the foundation's president: "Cutbacks in financial support for non-profits pale in comparison to what has happened to American industry. In no decade of American history has business faced such radical changes. International competition has challenged industry after industry—including ours."

'Pro-Active' Budget

Within A.T.&T. itself, however, grantmaking is showing signs of far greater sensitivity and sophistication.

Before divestiture, A.T.&T.'s philanthropy was characterized by the same ubiquity that marked "Ma Bell" itself. Just as wisdom had it that a job with the phone company was forever, grant recipients knew that if they could manage to get on the phone company's annual contributions list, they might stay on it forever. Grants were scattered broadly.

With Mr. Levy's arrival in May 1984 to head the new A.T.&T. Foundation, that era ended. Under his leadership, A.T.&T.'s even-handed philanthropy has given way to a "pro-active" budget.

This year, $6.1-million—almost half of the $13-million earmarked for education—will be awarded to colleges and universities under scientific and technical pro-

Continued on Following Page

Giving by the 7 New Regional Phone Companies:

	Foundation		Corporation, Foundations, & Subsidiaries		
Regional Company	**Assets**	**1986 Awards**	**1986 Giving**	**Gifts to Education**	**Notes**
AMERITECH AMERICAN INFORMATION TECHNOLOGIES Subsidiaries include Illinois, Indiana, Michigan, Ohio, and Wisconsin Bells.	$33,900,000	$1,600,000	$20,100,000	$4,000,000	The foundation supports projects on regional economic development, on the impact of telecommunications on society, and on public policy and telecommunications. In 1986 it created a five-year, $5-million program that will award $100,000 annually for faculty fellowships to each of 10 universities in Ameritech's five-state region. It also awarded a two-year, $300,000 grant to five economic-education councils to promote economic literacy. FOR MORE INFORMATION: Michael E. Kuhlin, director, Ameritech Foundation, 30 South Wacker Drive, Chicago 60606
Bell Atlantic™ Subsidiaries include Bell of Pennsylvania, C&P Telephone Companies, Diamond State Telephone, and New Jersey Bell, which provide local telephone service in Delaware, the District of Columbia, Maryland, New Jersey, Pennsylvania, Virginia, and West Virginia.	not applicable	not applicable	$14,535,000	$6,242,000	The corporation may create a foundation, but it has not yet made a final decision. Recent major grants to higher education include $283,800 in undergraduate scholarships and graduate-level fellowships in engineering at the Johns Hopkins University and a $40,000 grant to the National Society of Professional Engineers Education Foundation for scholarships in the corporation's seven-state area. FOR MORE INFORMATION: Ruth P. Caine, staff manager, Bell Atlantic, 10th Floor, 1310 North Court House Road, Arlington, Va. 22201.
BELLSOUTH Subsidiaries include South Central Bell and Southern Bell, which provide local telephone service in Alabama, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, and Tennessee.	$25,000,000	none	$9,000,000	$2,000,000	The foundation, which was created last December, will announce its grant-making guidelines, along with its first round of grants, in early fall. The foundation expects to coordinate all of the corporation's giving, which is expected to total $9-million again this year. FOR MORE INFORMATION: James McLain, Jr., contributions manager, BellSouth Foundation, Southern Bell Center, 675 West Peachtree St., N.E., Room 26J69, Atlanta 30375
NYNEX Subsidiaries include New England Telephone and New York Telephone, which provide local telephone service in Maine, Massachusetts, New Hampshire, New York, Rhode Island, Vermont, and part of Connecticut.	$23,000,000	$562,000	$11,800,000	roughly one-third	The foundation supports community partnerships that foster economic development and projects that offer "innovative solutions to societal problems." FOR MORE INFORMATION: Edward J. Hardy, executive director, NYNEX Foundation, 400 Westchester Ave., White Plains, N.Y. 10604

Grantmaking by Phone Companies Is Shuffled in Wake of Breakup

Continued from Preceding Page

grams that operate "by invitation only." The rest of the money will be spent this way: $2.3-million to match employees' gifts to higher education (A.T.&T. matches such contributions on a one-to-one basis); $3-million to cover installments due on gifts pledged in prior years and recurring gifts to organizations, such as the Independent College Funds of America, that represent groups of small, private liberal-arts colleges; $1-million to college capital campaigns; and $700,000 for "discretionary" grants, with a special emphasis on programs to benefit women, blacks, and, most recently, Hispanics.

Grants Pack a Greater Punch

Because of the extraordinary degree to which Mr. Levy has been able to marshal the corporation's non-cash resources and put them to work for colleges, those cash grants are packing a greater punch.

A.T.&T. grants are now carefully coordinated with the company's internships for undergraduate and graduate students, joint research-and-development projects, recruitment of new graduates, service by A.T.&T. executives on college governing boards, equipment donations, and loans of personnel and company facilities for college projects.

"We are trying to lend a sort of energetic coherence to our rich material and human resources," says Mr. Levy. "We're exploring the development of new programs to tap the energies of our people, our ideas, our property, and our employment capability on behalf of non-profits."

An example of Mr. Levy's approach is in place at Hampton University, one of nine historically black colleges receiving a package of benefits this year.

In response to a national shortage of minority scientists and engineers—a shortage that is critical enough to affect A.T.&T.'s own recruiting—the foundation this year donated two full years of Ruknet Cezzar's time to Hampton. Mr. Cezzar, a Bell Laboratories researcher who has a Ph.D. in computer science and 17 years of teaching and research experience, is teaching and advising computer-science students and helping to develop a new curriculum.

That hookup gave the university connections: Last year, A.T.&T. also gave Hampton $124,000 in cash, computer equipment with a $182,000 market value, and "surplus" supplies requisitioned by Mr. Cezzar from Bell Labs.

In setting up the new foundation, A.T.&T. changed its thinking on charitable giving dramatically. In the past, contributions simply came from the company's operating budget. Now it has a foundation whose earnings on its $130-million in assets must be distributed annually.

The new endowment came from a substantial portion of the proceeds from the sale of A.T.&T.'s old headquarters building in New York City; from assets of the Western Electric Company, now a division of A.T.&T.; and from Bell Labs.

'Did Not Lose Sight of Obligation'

Anne Alexander, vice-president for education at the A.T.&T. Foundation, is proud of the company's action in setting up a foundation. "The decision to allocate those assets was important and tough," she says. "In a year of difficult cuts and enormous pressures, the corporation's top executives did not lose sight of the importance of the non-profit sector and their obligation to support it."

Mr. Levy's appointment itself was somewhat unexpected. In what has been described as a WASP-dominated corporate culture with a long history of promoting from within, Mr. Levy was brought in from outside—over the heads of several longtime contributions officers.

While Mr. Levy had solid academic credentials—in 1973 he earned both a Ph.D. in government and foreign affairs from the University of Virginia and a law degree from Columbia University—he had never administered a grant.

He was, however, used to shaking up bureaucracies. In the mid-1970's, he worked on solving New York City's fiscal crisis; as executive director of New York's 92nd Street Y between 1977 and 1984, he transformed it into one of the city's most vital cultural organizations.

In March 1986 Mr. Levy was given additional A.T.&T. responsibilities as vice-president for corporate affairs, a position that has broad, policy-making responsibilities in public affairs, public relations, and international operations.

Called 'Sensitive and Sensible'

If it's too early for the grant-making community to assess the foundation's work, its grantees rhapsodize over it.

"A.T.&T.'s grants are sensitive and sensible," says Peter A. Buchanan, vice-president for development at Columbia University, which has received a substantial grant to support junior faculty members. The university's pioneering efforts have been emulated by many other institutions

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84-Million Awarded to Charity in 1986

Regional Company	Foundation		Corporation, Foundations, & Subsidiaries		Notes
	Assets	1986 Awards	1986 Giving	Gifts to Education	
ACIFIC TELESIS oup sidiaries include Pacific Telephone Nevada Bell, which offer local phone service in California and ada.	$29,000,000	$5,100,000	$8,300,000	$2,360,000	The foundation's major college program provides scholarships to 300 minority-group members who are studying engineering at 13 California colleges and universities and involves Pacific Bell engineers as mentors. FOR MORE INFORMATION: Jere A. Jacobs, president, Pacific Telesis Foundation, Room 1723, 140 New Montgomery Street, San Francisco 94105
Southwestern Bell Corporation or subsidiary is Southwestern Bell, ch provides local telephone service in ansas, Kansas, Missouri, ahoma, and Texas.	$28,000,000	$11,900,000	$11,900,000	$3,000,000	Recent grants to higher education include several grants totaling $920,000 to Washington University in St. Louis for medical research, construction of facilities, and scholarships; $225,000 to Saint Louis University and $150,000 to Texas Tech University for capital campaigns; and two grants totaling $165,000 to the Independent College Funds of Texas and Kansas. FOR MORE INFORMATION: Charles O. DeRiemer, executive director, Southwestern Bell Foundation, 1 Bell Center, 38-K-8, St. Louis 63101
JSWEST sidiaries include Mountain Bell, thwestern Bell, and Pacific thwest Bell, which provide local phone service in Arizona, Colorado, o, Iowa, Minnesota, Montana, raska, New Mexico, North Dakota, gon, South Dakota, Utah, hington, Wyoming.	not applicable	not applicable	$17,000,000	roughly one-third	Preferring to make contributions through its three local Bell subsidiaries, the corporation has decided not to create a foundation. Last year, the corporation's major grants to higher education included $250,000 challenge grants to support capital campaigns at the University of Colorado and Colorado State University, and a five-year, $500,000 grant to Creighton University to endow a professorship in economic research. It also gave $177,000 in stock to the Independent Colleges of Colorado. FOR MORE INFORMATION: Jane J. Prancan, director, community affairs, U. S. West, Suite 480, 7800 East Orchard Road, Englewood, Colo. 80111

West provides financial support to an operating foundation, U. S. West Education Foundation, which does not make grants to colleges and universities. The foundation operates a single educational ram, Choices, which encourages students to plan for college by sending corporate employees to ninth-grade classrooms to run daylong seminars on motivation, time-management, and self-discipline. more information, contact Gary A. Frizzell, executive director, U. S. West Education Foundation, 720 Olive Way, Suite 521, Seattle 98101.

oncerned about the faculty shortage that ill develop in the next 15 years.

Says Donald C. Hood, Columbia's vice-resident for arts and sciences: "When I poke to Anne [Alexander], she saw the roblem immediately. A month later she alled back with the grant."

Another A.T.&T. grant addresses the is-e of getting low-income Hispanic stu-ents into the college "pipeline" at an arly stage. Arizona State University's other-daughter program for Hispanics lentifies talented Hispanic girls at area nior high schools and brings them to the ampus with their mothers.

The girls hear presentations and take eld trips to a variety of professional set-ngs, attend laboratories on writing and omputer skills, and participate in career-ounseling sessions.

"Most of the girls have scarcely been ut of the *barrio*, much less set foot on a ollege campus," says Jo Anne O'Don-ell, Arizona State's associate dean of stu-ent life. "They really need to be motivat-d to even apply to college."

Ms. O'Donnell says many of the girls ave home responsibilities, and it's often a big deal" just to finish high school.

"Where push comes to shove is making others realize that if their kids take these ougher courses, they've got to have more me for homework," she says. "When a mother gets behind the idea, often the whole extended family—aunts and uncles, grandparents—gets pulled in to help make it work."

While it's too early to have hard results from the program, 50 per cent of those who have gone through it are now taking college-track courses in high school. And four of the 60 mothers in the program have enrolled in college themselves.

Ms. Alexander says A.T.&T. decided to sponsor the program after employees at an A.T.&T. copper-wire manufacturing plant in Phoenix suggested it.

Invitations to Submit Proposals

At least half of A.T.&T.'s grants are based on ideas that come to the foundation from local levels of the company in this manner. As a result, Ms. Alexander spends at least half of her time coordinating internal requests for support.

Typically, the foundation invites only institutions with which the corporation has a technical relationship to submit proposals for special science projects or for curricula dealing with manufacturing technologies.

"We use every tool we can think of to build relationships with academic departments that are important to us," says Kumar Patel, executive director of research, materials science, engineering, and academic affairs for A.T.&T.'s Bell Labs. "It's not just a question of cash support. We want to be in close touch with those who are at the leading edge of scientific research in our areas."

Mr. Patel coordinates such interactions as chief of A.T.&T.'s Campus Angels, a group created shortly after divestiture to provide coherence to A.T.&T.'s relations with universities. Mr. Patel is the designated angel for Stanford University; 40 other officials work with individual institutions to coordinate recruiting of college graduates, relationships with college presidents, and grant applications.

Under these technical programs, much of the foundation's money goes to train scientists. Each year A.T.&T. awards scholarships for doctoral studies to 25 outstanding women nominated by the universities with which A.T.&T. has a relationship; awards grants to junior faculty investigators; and helps with the acquisition of scientific instruments.

'Astute Discussions' with Grantees

Once submitted, proposals are reviewed by six or eight scientists in each discipline, and often are returned to the university with questions or suggestions for revision.

Robert A. Gross, dean of Columbia's school of engineering and applied science, says the angel system works. "Few foundations focus their giving as intelligently as A.T.&T., mostly because their team captain has astute discussions with us before they make a grant," he says.

What the future holds for A.T.&T. philanthropy is uncertain.

The corporation itself is still in the midst of the gut-wrenching changes, cutbacks, and strategy reformulations that have plagued it since divestiture. Since 1984, A.T.&T. has laid off an additional 66,000 employees, and its ranks of corporate officers have been reduced from 180 at the time of the breakup to 125 today. Last year, revenues declined for the first time since 1933, mostly due to a 17-per-cent drop in equipment rentals.

Allowed, since divestiture, to do business overseas, A.T.&T. has yet to win major contracts there. And the corporation's entry into the computer business, where it had once entertained hopes of "redefining" an industry, was marked by a crushing $1-billion loss in 1986.

Still, the company's long-distance, equipment-manufacturing, and telephone-switching businesses remain highly profitable. And Mr. Levy and Ms. Alexander remain steadfast in their commitment to be responsive to good ideas that come in "over the transom." Says Mr. Levy: "We really read and really write in response to each inquiry, and that is an enormous commitment on the pert of A.T.&T."

6/29/87 C2175-1A

THE CHRONICLE
of Higher Education.

ISSN 0009-5982

July 1, 1987 • $1.95
Volume XXXIII, Number 42

News Summary

Articles on inside pages

Higher-education officials are offering talented high-school students scholarships if they attend college in their home states. Story on Page 13.

Artificial-intelligence researchers are beginning to regard neural networks as a legitimate research area. Story on Page 5.

The federal government, industry, and academe may cooperate in a $1.6-billion effort to develop high-performance computer systems. Story on Page 5.

English teachers are looking for ways to hold the attention of students raised on television. Story on Page 9.

Conservative student activists remain loyal to President Reagan in spite of the Iran-contra hearings, but some moderates are defecting. Story on Page 21.

Campus health educators are seeking answers to a "second generation" of questions about AIDS. Story on Page 21.

Stanford University has asked to be exempt from enforcing the N.C.A.A.'s drug-testing program until a decision is made on the tests' legality. Story on Page 23.

Governor Clements was responsible for the decision to continue paying football players at Southern Methodist University, says a report from a panel of bishops. Story on Page 23.

The difference between public and private higher education is blurring as more nations engage in "privatization." Story on Page 25.

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'WE REJECT THE VACATION'

Early Campus Closings Will Not Stall Demonstrations, Korean Students Vow

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Following a clash with police, Korean student protesters rally on the campus of Chonam University.

By JOHN E. GITTELSOHN

SEOUL, SOUTH KOREA

OFFICIALLY the campuses were closed for the summer. But the South Korean students whose anti-government protests had shut the gates ahead of schedule were not staying home.

"We reject the vacation they have given us," said a physics major from Yonsei University. "Of course to study is important, but the fate of our country is more important. Democracy is more important than school."

Such comments were echoed widely at Seoul's campuses last week, even as President Chun Doo Hwan took preliminary steps toward accommodating the opposition's demands for electoral and constitutional reform by meeting with a major political rival, Kim Young Sam.

The early campus closings generally occurred before final examinations for the spring semester could be given, but few students seemed worried about how they might affect their education or the universities' future. Professors also took the closings in stride, having witnessed many such disruptions before.

"This year was better than 1980," said Park Seong Rae, who teaches at Hankuk University of Foreign Studies. "I finished my last lecture, and only the final exams weren't taken. There was no loss of lessons for the students. The main problem is getting grades out by early July."

Campuses Bathed by Tear Gas

Ever since June 10, when the ruling Democratic Justice Party nominated Roh Tae Woo to succeed Mr. Chun, South Korean campuses have been bathed by the tear gas used by riot policemen in violent confrontations with student demonstrators. Although the President's meeting with Mr. Kim calmed things down for a while in city centers across the nation, colleges and universities experienced persistent unrest.

Here in the capital, Yonsei University became the gathering place for a citywide coalition of student protesters, the Alliance of Seoul Universities. Early last week, thousands of demonstrators clashed repeatedly with tear-gas-firing police. The next day, an estimated 20,000 students from 24 institutions in the Seoul area held an unusually peaceful assembly—all the more remarkable because riot policemen remained stationed outside campus gates throughout the two-hour rally.

The second semester of the academic year is scheduled to begin September 1, and students said they would continue to hold rallies until they saw concrete signs of progress. Late last week they were planning to join a

Continued on Page 28, Column 1

AAUP Lifts Censure from 6 Colleges, Adds 4 to List

Professors' unit cites 'progress' in restoring academic freedom

By LIZ McMILLEN

LOS ANGELES

The American Association of University Professors has removed six institutions from its list of censured administrations. The colleges have made "real progress" in correcting violations of academic freedom, the association said.

At the same time, delegates to the A.A.U.P.'s 73rd annual meeting here voted to add four institutions—the Catholic University of Puerto Rico, Husson College, Morgan State University, and Southern Nazarene University—to the censure list.

The actions brought the number of colleges on the censure list to 47, down from last year's 49.

Removed from the list were Clark College in Georgia, Goucher College, McKendree College, Morehead State University in Kentucky, Southern University in Louisiana, and Tennessee Wesleyan College.

Association officials said they were pleased by the number of removals, the highest since 1975. Indeed, between that action and the southern California sun-

Continued on Page 10, Column 1

Angry Congressmen Upbraid Colleges over Businesses

By SCOTT JASCHIK

WASHINGTON

Members of a Congressional panel reviewing the business activities of non-profit organizations told college leaders here last week that they could expect major changes in the way the federal tax code treats their commercial operations.

With anger and sarcasm, the Congressmen castigated higher-education officials for being poorly prepared and unwilling to acknowledge abuses by their institutions.

Said Rep. Beryl Anthony, Jr., an Arkansas Democrat: "I hope you don't come here and leave thinking the world is going to be the same. After these hearings, there are going to be changes."

Rep. William M. Thomas, a California Republican and a professor of government at Bakersfield College, was even more blunt. "As a tenured faculty member, I'm on your side," he said, "But I'm pretty disappointed in your testimony today. Most of it reads like a graduate paper in education."

After calling the statement submitted by the American Council on Education and 16 other higher-education groups "basically platitudes," Mr. Thomas said, "A whitewash isn't going to do you any good. You had an opportunity to work with us. You

Continued on Page 14, Column 1

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cy, Henry A. Kissinger, the former Secretary of State, couldn't teach in the state because of his German accent.

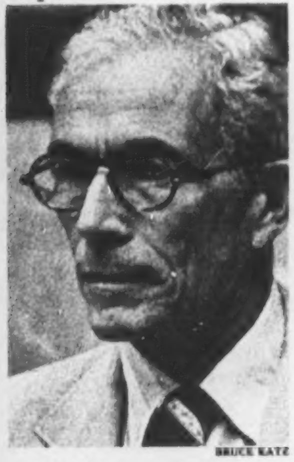
Ex-Professor Is Accused of Fabricating Research

A former medical faculty member at the University of California at San Diego has been accused of dishonesty and misrepresentation for allegedly fabricating research in 13 manuscripts submitted for publication in professional journals.

The California Board of Medical Quality Assurance filed the charges against Robert Slutsky. They will be heard by an administrative-law judge and could lead to sanctions or revocation of his state medical license.

Dr. Slutsky resigned as associate clinical professor of radiology at the San Diego campus in 1985 after a faculty committee accused him of falsifying research that was published in the *Journal of the American College of Cardiology*.

Senator Pell to Receive Top Award from CASE



BRUCE KATZ

Sen. Claiborne Pell, Democrat of Rhode Island, is the 1987 recipient of the James L. Fisher Distinguished Service to Education Award from the Council for Advancement and Support of Education.

Mr. Pell, who served as chairman of the Senate Subcommittee on Education from 1969 to 1981, introduced legislation creating the Basic Education Opportunity Grants, later renamed "Pell Grants" by Congress. He was also chief sponsor of the re-authorization of the Higher Education Act, the Elementary and Secondary Education Act, and the Vocation Education Act

Los Angeles Campus Adopts Earthquake Plan

The University of California at Los Angeles has announced plans to improve the earthquake safety of 37 buildings on its campus at a cost of between $110-million and $150-million.

The state is expected to provide up to $100-million, with the rest to come from residence-hall, student-union, and parking fees. The project is expected to take about eight years.

A state study two years ago found that many buildings on the campus could not withstand a strong earthquake, and that a quake on a normal workday would kill about 2,000 people.

Gallaudet U. TV Program Wins an Emmy Award

Gallaudet University's Department of Television, Film, and Photography has received an Emmy award from the Washington chapter of the National Academy of Television Arts and Sciences for a program called "Deaf Mosaic."

The program, produced by a staff of both deaf and hearing television professionals, was recognized as the outstanding independent production of 1986-87 at award ceremonies last month.

"Deaf Mosaic" has also been recognized with a Silver Cindy Award by the Association of Visual Communications.

The program is produced using sign language, open captions, and appropriate "voice-overs."

U. of California May Move Headquarters to Oakland

A commercial center in Oakland, Cal., has been selected as the site of the administrative headquarters of the University of California, which has been located in Berkeley since 1873.

University officials are seeking to move the first contingent of 400 employees from leased facilities in Berkeley, depending on successful negotiations of a lease with owners of the Oakland center and approval by the Board of Regents.

The other 800 employees at the university's headquarters, now working at four sites in Berkeley, will follow if arrangements can be made for the Oakland center to accommodate them.

Ex-Official Pleads Guilty in Student-Aid Theft

James W. Martin, the former director of minority affairs at the Medical University of South Carolina, has pleaded guilty in the theft of $42,950 in student aid.

According to South Carolina's Deputy Solicitor, J. Stephen Schmutz, Mr. Martin told minority students that half their financial-aid check was meant for other students. He would then go to the bank with the student to cash the check, pocketing half the money for himself.

Mr. Martin, who pleaded guilty to one count of breach of trust, a felony, faces up to 10 years in prison, Mr. Schmutz said.

Corrections

► In a Fact-File on endowments (*The Chronicle*, May 20), Tufts University incorrectly reported that its 1985 endowment was $97,675,000. The correct figure is $77,675,000.

► An item in "Research Notes" (*The Chronicle*, June 17) identified Michael P. Fitzsimmons as a historian at Auburn University. Mr. Fitzsimmons teaches at Auburn University at Montgomery.

Seeking to Redeem Artistic Reputations

A professor makes a specialty of finding lost paintings and sculptures

By ZOË INGALLS

DALLAS

In a corner of Eleanor Tufts's modest living room stands a life-size marble statue of Lady Godiva. The statue—fully clothed, because it was made in the Victorian age and "Godiva was a virtuous woman"—is the work of the 19th-century American sculptor Anne Whitney.

Ms. Tufts, a professor of art history at Southern Methodist University, relates with enthusiasm how she sought and, after two years of frustrated searching, finally won a look at the Godiva for an article on Whitney she was researching. (Later, she purchased the statue.)

Seeking out, and retrieving, lost works of art might be called one of Eleanor Tufts's specialties. In 1974 she published what is still considered the pioneering work on female artists, *Our Hidden Heritage: Five Centuries of Women Artists*, the first book in this century to recover and bring into public focus the achievements of woman artists beginning with the Renaissance.

Since then, Ms. Tufts has lectured across the country on woman artists and a few years ago published a second book on them.

Thus, when officials of the new National Museum of Women in the Arts, which opened recently in Washington, were seeking an expert on woman artists to act as curator of the inaugural exhibit, Eleanor Tufts was a natural choice. The result, "American Women Artists, 1830-1930," is the first major traveling exhibit of American woman artists, she says. It opens this week in Minneapolis, and will travel to Hartford, San Diego, and Dallas.

FRANCES THOMPSON

Eleanor Tufts with Lady Godiva: "Why is so little known about great women artists?"

■

"Why are there no great women artists?" Ms. Tufts says it is a question she is often asked. A better question, she says, is, "Why is so little known about great women artists of the past?"

The answer, she says, "would seem to point to a collective and rather recent cultural neglect."

"The basic art survey books used today only rarely allude to the names of women artists, and even most histories dealing with specific periods of art do not seriously consider their work," she wrote in her first book. "Yet in the past, women were appointed as court painters, were accepted as professionals, and were unstintingly appreciated by their contemporaries."

The book includes such artists as Lavinia Fontana, Maria Sibylla Merian, and Rachel Ruysch—none of them household names.

Consider Rosalba Carriera, who introduced pastel portraits that became the vogue in early 18th-century Paris. Or Elisabetta Sirani, whose fame at the time of her death in 1665 was such that her native Bologna held "an impressive day-long funeral service with sculpture, architecture, music, and poetry specially commissioned" to mark the occasion, Ms. Tufts says.

Some art historians have argued that if woman artists were neglected, "well maybe they deserved to be," Ms. Tufts says.

She disagrees: "The quality of their work is equal. The scholarship was being done by men who regarded male artists as the important ones and viewed the women as dilettantes or amateurs."

■

Eleanor Tufts came to art history relatively late in life. Born in 1927 in Exeter, N. H., she attended Simmons College and graduated in 1949 with a B.S. in personnel.

Ms. Tufts says her "burning desire was to keep peace in the world." For 14 years she worked for organizations that arranged and conducted cultural exchanges, including the first exchanges of students between the United States and the Soviet Union.

She enrolled in a master's program in art history at Harvard University in 1956 and received her degree the following year. Ms. Tufts taught at the University of Bridgeport from 1964 to 1966, when she went to Southern Connecticut State University as an assistant professor. She became associate professor in 1971, the same year she received her Ph.D. from New York University. Ms. Tufts came to S.M.U. as chairman of the division of fine arts in 1974.

■

Lady Godiva stands in Eleanor Tufts's living room, and now Ms. Tufts encourages her visitor to take a closer look. "The motif of the horse appears in the border of her gown—the head here." She points. "And the hindquarters here."

With a few exceptions, she says, "there weren't any women sculptors in the world before the 19th century. You see, women earlier could do paintings in their homes, but marble—it's heavy material. You need stonecutters.

"I often think of Jane Austen writing on her lap in her living room. In the same way, these early women artists would unobtrusively work as painters."

Her own interest in female painters began in 1968, sparked by "four stunning still lifes" that caught her eye in the Prado Museum, where she was gathering material for her dissertation on Luis Meléndez, the Spanish painter. The artist was Clara Peeters. "I thought, Who is this Clara Peeters?"

Later that year, pursuing her research on Meléndez in Naples, she came across a portrait by Sofonisba Anguissola. "No one studying art history in America had ever heard of her either," Ms. Tufts recalls. "The next summer in England, I kept coming across paintings by those artists, and I started building up files of index cards on them."

After her initial book on woman artists came out, Ms. Tufts became well known as a "feminist" art historian—a label she eschews. "In my personal life, I'd say, Yes, I'm a feminist. But I've never tried to be a feminist art historian. I've just tried to be an art historian."

When her book on Luis Meléndez was published in 1985, one reviewer said, "Meléndez, as he looks down from the heaven where all our good dead artists surely dwell, must be casting an appreciative glance at Eleanor Tufts, the redeemer of his earthly reputation."

"I hope," Ms. Tufts says, "I'm doing the same thing for a lot of women artists. These are good artists. All they needed was a little fresh press on them."

7/6/87 C2175-1

THE CHRONICLE
of Higher Education.

July 8, 1987 • $1.95
Volume XXXIII, Number 43

News Summary

Articles on inside pages

Transplanting cells into the human brain may reverse the effects of neurological disorders. Story on Page 4.

Colleges are making little effort to hire women and minority-group members for their faculties, new studies show. Story on Page 11.

The nomination of Robert H. Bork (*right*) to be a Supreme Court Justice could affect rulings on affirmative action, faculty and student rights, and access to documents. Cases that involve those issues and others in higher education were often decided by a swing vote cast by retiring Justice Lewis F. Powell. Stories on Pages 15 and 16.

A tax on endowments is one of the ideas for raising new revenue that will be considered by the House Ways and Means Committee. Story on Page 15.

More black students will receive scholarships to South Africa's integrated universities under an expansion of a program begun by New England colleges. Story on Page 19.

The categories of two-year colleges, vocational-education institutions, and research universities have grown most since 1976, according to a new Carnegie Foundation classification that appears on Pages 22-30.

Academics from the third world are troubled by the growing emphasis on economic and national-security interests as a reason for "internationalizing" American higher education. Story on Page 35.

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Korean Universities May Gain Autonomy Under Reform Plan

President accepts changes to end 'outside intervention'

By **JOHN E. GITTELSOHN**

SEOUL, SOUTH KOREA

The political concessions announced last week by President Chun Doo Hwan may usher in a new era of autonomy and academic freedom for South Korea's colleges and universities.

Mr. Chun said in an address to the nation that he fully accepted sweeping democratic reforms that had been proposed just two days earlier by his hand-picked successor, Roh Tae Woo, chairman of the ruling Democratic Justice Party.

The President acted after several weeks of massive anti-government demonstrations that had primarily involved university students but also had begun to attract widespread support from other citizens.

Mr. Roh's proposals came in a speech that surprised the nation—and much of the international community—by the degree to which it embraced key opposition demands for constitutional and electoral changes. The plan now approved by President Chun would include direct presidential elections, a strengthening of human-rights protections, freedom of the press, and increased "self-regulation" in South Korean society.

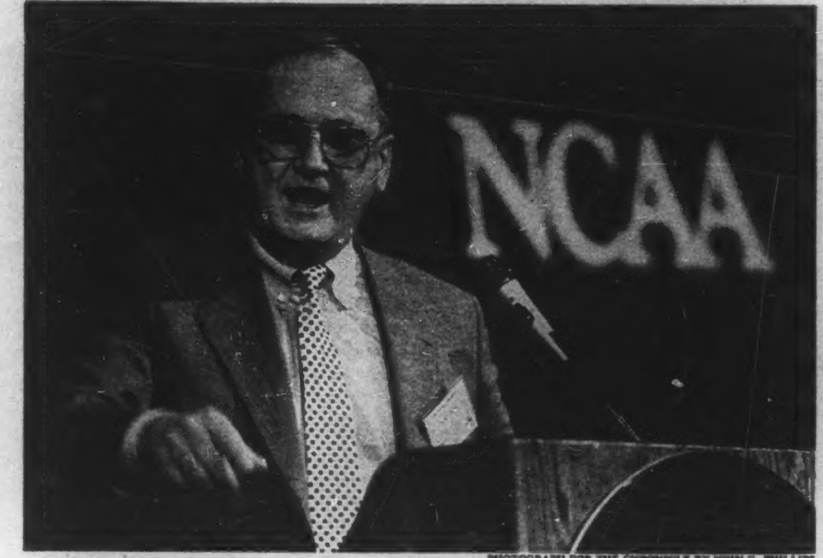
Self-Governance for Colleges

In a section of his speech devoted to higher education, Mr. Roh said the nation's colleges and universities "must be made self-governing, and educational autonomy in general must be expeditiously put into practice.

"To that end," he said, "the personnel and budgetary policies and general administration of universities and colleges should be free of outside intervention.

"Enrollment and graduation systems should also be improved to allow them greater autonomy. Scholarship systems

Continued on Page 36, Column 1



PHOTOGRAPH FOR THE CHRONICLE BY JOHN C. PHILLIPS

"We are not the enemy," G. E. (Bo) Schembechler, football coach at the University of Michigan, told last week's N.C.A.A. forum, which is to kick off an 18-month debate on intercollegiate sports. Story on Page 32.

NCAA Rebuffs Its Presidents' Commission on Proposals to Control Costs of Sports

By **CHARLES S. FARRELL**

DALLAS

Delegates to last week's special convention of the National Collegiate Athletic Association here rejected virtually all of the proposals to cut costs in intercollegiate sports put forth by the N.C.A.A.'s presidents' commission.

The rebuff raised questions both about the association's commitment to reforming college sports and about the continued effectiveness of the presidents' panel.

John B. Slaughter, the commission's chairman and the chancellor of the University of Maryland at College Park, said he was disappointed, but not surprised, by the results. He conceded that the commission had not lobbied hard enough for the cuts and that the presidents might have become too involved in the details of cutting expenses.

"I think we probably did not do as good a job as we should have of working with other presidents and chancellors to make sure they understood our views," Mr. Slaughter said.

But, he added, "I don't think this suggests we've lost our zeal."

He argued that the forum on the future of college sports also held at the meeting here

Continued on Page 32, Column 2

Private Colleges Mount Intensified Campaigns for State Financial Aid

By **CAROLYN J. MOONEY**

When the presidents of Minnesota's 17 private colleges seek to demonstrate their institutions' value to the state, they are likely to focus on one key contribution—the money they save Minnesotans.

For example: Private colleges granted 32 per cent of Minnesota's baccalaureate degrees last year, but received only 2.4 per cent of the state's $707.4-million higher-education appropriation, says the Minnesota Private College Research Foundation. All of that was for student aid.

Throughout the country, private colleges are making points like those more often, more eloquently, and more intensely than ever before.

Special Study Planned

Private institutions in many states have launched campaigns to seek more generous state student-aid programs. Many are also trying to get money for buildings, equipment, and other needs that traditionally have not been financed by state funds.

The states themselves are also taking a closer look at public policy toward private higher education. The Education Commission of the States this week plans to ap-

Continued on Page 17, Column 1

European Physicists Promote Smaller Alternative to Proposed $4.4-Billion U.S. Supercollider

By **KIM McDONALD**

GENEVA

Sensing that the U.S. Congress will oppose construction of a $4.4-billion Superconducting Supercollider in the United States, European physicists have begun promoting a less costly version that they say could accomplish as much as the American machine for under one-fifth the cost.

Many American physicists doubt the European collider could be built that cheaply and warn that proceeding with its construction would seriously disrupt the operation of other particle accelerators now being built in Europe.

But the proposal is gaining popularity with many European politicians. They believe it would maintain Europe's leadership in particle physics—particularly if the American supercollider is not built. A debate is now raging in Congress over whether to push ahead with the U.S. project.

Colliders Similar in Concept

Details of Europe's proposed Large Hadron Collider were presented here last month to the governing council of the European Organization for Nuclear Research, known as CERN, by a panel of prominent physicists studying the future needs of CERN scientists.

The European collider would be similar

Continued on Page 4, Column 3

Carnegie Foundation's Classifications of More than 3,300 Institutions of Higher Education

ALABAMA

Alabama A&M U	Comp I
Alabama Aviation and Tech C	2-year
Alabama St U	Comp I
Alabama Tech C	2-year
Alexander City St JC	2-year
American Inst of Psychotherapy-Grad Sch of Professional Psych	Other
Athens St C*	LA II
Auburn U	
Main Campus	Res II
Montgomery	Comp I
Bessemer St Tech C	2-year
Birmingham Southern C	LA II
Booker T Washington JC Business	2-year
Brewer St JC	2-year
Chattahoochee Valley CC	2-year
Chauncey Sparks St Tech C	2-year
Concordia C	2-year
Douglas MacArthur St Tech C	2-year
Enterprise St JC	2-year
Faulkner U	Comp II
Gadsden St JC	2-year
George C Wallace St CC-Dothan	2-year
George C Wallace St CC-Hanceville	2-year
George C Wallace St CC-Selma	2-year
Harry M Ayers St Tech C	2-year
Hobson St Tech C	2-year
Huntingdon C*	LA II
International Bible C	Relig
J F Drake St Tech C	2-year
Jacksonville St U	Comp I
James H Faulkner St JC	2-year
Jefferson Davis St JC	2-year
Jefferson St JC	2-year
John C Calhoun St CC	2-year
John M Patterson St Tech C	2-year
Judson C	LA II
Lawson St CC	2-year
Livingston U*	LA II
Lomax-Hannon JC	2-year
Lurleen B Wallace St JC	2-year
Marion Military Inst	2-year
Miles C*	LA II
Mobile C*	LA II
Muscle Shoals St Tech C	2-year
N F Nunnelly St Tech C	2-year
National Education Center-National Inst of Tech Campus	2-year
Northeast Alabama St JC	2-year
Northwest Alabama St JC	2-year
Northwest Alabama St Tech C	2-year
Oakwood C*	LA II
Patrick Henry St JC	2-year
Reid St Tech C	2-year
RETS Electronic Inst	2-year
S D Bishop St JC	2-year
Samford U	Comp I
Selma U	LA II
Shelton St CC	2-year
Snead St JC	2-year
Southeastern Bible C	Relig
Southern JC of Business	2-year
Southern Tech C	2-year
Southern Union St JC	2-year
Southwest St Tech C	2-year
Spring Hill C	LA II
Stillman C*	LA II
Talladega C*	LA II
Trenholm St Tech C	2-year

ALABAMA—Continued

Troy St U	
Main Campus	Comp I
Dothan	Comp II
Montgomery	Comp II
Tuskegee U	Comp I
United States Sports Academy	Other
U of Alabama	
U Campus	Doc I
Birmingham	Doc II
Huntsville	Comp I
U of Montevallo	Comp I
U of North Alabama	Comp I
U of South Alabama	Comp I
Walker C	2-year
Walker St Tech C	2-year

ALASKA

Alaska Bible C	Relig
Alaska Pacific U*	LA II
Sheldon Jackson C	Teach
U of Alaska	
Anchorage	Comp I
Fairbanks	Comp I
Juneau	Comp II
Anchorage CC	2-year
Islands CC	2-year
Kenai Peninsula CC	2-year
Ketchikan CC	2-year
Kodiak CC	2-year
Kuskokwim CC	2-year
Matanuska-Susitna CC	2-year
Northwest CC	2-year
Tanana Valley CC	2-year

ARIZONA

American Grad Sch of International Management	Corp
American Indian Bible C	Relig
Arizona Automotive Inst	2-year
Arizona C of the Bible	Relig
Arizona St U	Res II
Arizona Western C	2-year
Central Arizona C	2-year
Cochise C	2-year
DeVry Inst of Technology	Corp
Eastern Arizona C	2-year
Grand Canyon C*	LA II
Maricopa County CC District	
Glendale CC	2-year
Maricopa Tech CC	2-year
Mesa CC	2-year
Phoenix C	2-year
Rio Salado C	2-year
Scottsdale CC	2-year
South Mountain CC	2-year
Miller Inst	2-year
Mohave CC	2-year
Navajo CC	2-year
Northern Arizona U	Doc II
Northland Pioneer C	2-year
Pima County CC	2-year
Prescott C*	LA II
Southwestern Conservative Baptist Bible C	Relig
U of Arizona	Res I
U of Phoenix	Bus
Western International U	Bus
Yavapai C	2-year

ARKANSAS

Arkansas Baptist C*	LA II
Arkansas C*	LA II
Arkansas St U	
Main Campus	Comp I
Beebe	2-year
Arkansas Tech U	Comp I
Capital City JC	2-year
Central Baptist C	Relig
Crowley's Ridge C	2-year
East Arkansas CC	2-year
Garland Co CC	2-year
Harding U	Comp I
Henderson St U	Comp I
Hendrix C	LA II
John Brown U*	LA II
Mississippi County CC	2-year
National Education Center-Arkansas C of Technology	2-year
North Arkansas CC	2-year
Ouachita Baptist U	Comp II
Philander Smith C*	LA II
Phillips County CC	2-year
Rich Mountain CC	2-year
Shorter C	2-year
Southern Arkansas U	
Main Campus	Comp II
El Dorado	2-year
Tech Branch	2-year
Southern Baptist C	Relig
U of Arkansas	
Main Campus	Doc I
Little Rock	Comp I
Medical Sciences	Med
Monticello	Comp II
Pine Bluff	Comp I
U of Central Arkansas	Comp I
U of the Ozarks*	LA II
Westark CC	2-year

CALIFORNIA

Allan Hancock C	2-year
American Academy of Dramatic Arts-West	2-year
American Baptist Seminary of the West	Relig
American Conservatory Theatre	Art
American Film Inst-Center for Advanced Film Studies	Art
Antelope Valley C	2-year
Armstrong U	Bus
Art Center C of Design	Art
Azusa Pacific U	Comp II
Bakersfield C	2-year
Barstow C	2-year
Bay-Valley Tech	2-year
Bethany Bible C*	LA II
Biola U	Doc II
Brooks C	2-year
Brooks Inst	Art
Butte C	2-year
Cabrillo C	2-year
California Baptist C*	LA II
California C of Arts and Crafts	Art
California C of Podiatric Medicine	Hlth
California Family Study Center	Other
California Inst of Integral Studies	Other
California Inst of Technology	Res I
California Inst of the Arts	Art

CALIFORNIA—Continued

California Inst of Transpersonal Psychology	Other
California Lutheran U	Comp II
California Maritime Academy	Other
Cal Sch of Professional Psychology	
Berkeley	Other
Fresno	Other
Los Angeles	Other
San Diego	Other
California St U System	
Bakersfield	Comp I
Chico	Comp I
Dominguez Hills	Comp I
Fresno	Comp I
Fullerton	Comp I
Hayward	Comp I
Long Beach	Comp I
Los Angeles	Comp I
Northridge	Comp I
Sacramento	Comp I
San Bernardino	Comp I
Stanislaus	Comp I
Humboldt St U	Comp I
Polytechnic St U San Luis Obispo	Comp I
Polytechnic U Pomona	Comp I
San Diego St U	Comp I
San Francisco St U	Comp I
San Jose St U	Comp I
Sonoma St U	Comp I
California Western Sch of Law	Law
Cerritos C	2-year
Cerro Coso CC	2-year
Chabot C	2-year
Chaffey CC	2-year
Chapman C	Comp I
Christ C Irvine*	LA II
Christian Heritage C*	LA II
Church Divinity Sch of the Pacific	Relig
Citrus C	2-year
Claremont Graduate Sch	Doc I
Claremont McKenna C	LA I
Cleveland Chiropractic C	Hlth
Coast CC District	
Coastline CC	2-year
Golden West C	2-year
Orange Coast C	2-year
Coleman C	Other
C for Developmental Studies	Teach
C of Marin	2-year
C of Notre Dame	LA II
C of Oceaneering	2-year
C of Osteopathic Medicine of the Pacific	Med
C of the Canyons	2-year
C of the Desert	2-year
C of the Redwoods	2-year
C of the Sequoias	2-year
C of the Siskiyous	2-year
Columbia C at Columbia	2-year
Columbia C at Hollywood	Other
Compton CC	2-year
Condie JC	2-year
Contra Costa CC System	
Contra Costa CC	2-year
Diablo Valley C	2-year
Los Medanos C	2-year
Crafton Hills C	2-year
Cuesta C	2-year
Cuyamaca C	2-year

CALIFORNIA—Continued

Cypress C	2-year
D-Q U (Lower Division)	2-year
Deep Springs C	2-year
Dominican C of San Rafael	LA II
Dominican Sch of Philosophy and Theology	Relig
Don Bosco Technical Inst	2-year
El Camino C	2-year
Fashion Inst of Design and Merchandising	2-year
Fielding Inst	Other
Foothill-DeAnza CC District	
De Anza C	2-year
Foothill C	2-year
Franciscan Sch of Theology	Relig
Fresno Pacific C	LA II
Fuller Theological Seminary	Relig
Fullerton C	2-year
Gavilan C	2-year
Glendale CC	2-year
Golden Gate Baptist Theological Seminary	Relig
Golden Gate U	Comp I
Graduate Theological Union	Relig
Grantham C of Engineering	Engr
Grossmont C	2-year
Hartnell C	2-year
Harvey Mudd C	Engr
Heald C (Business Division)	2-year
Heald C (Technical Division)	2-year
Heald C at Concord	2-year
Heald C at Fresno	2-year
Heald C at Sacramento	2-year
Heald C at San Jose	2-year
Heald C at Santa Clara	2-year
Heald C at Santa Rosa	2-year
Heald C at Walnut Creek	2-year
Hebrew Union C-Jewish Inst of Religion (California Branch)	Relig
Holy Names C	LA II
Humphreys C	2-year
Imperial Valley C	2-year
Indian Valley C's	2-year
International C	Doc I
International Sch of Theology	Relig
ITT Technical Inst at La Mesa	2-year
ITT Technical Inst at West Covina	2-year
Jesuit Sch of Theology at Berkeley	Relig
John F Kennedy U	Comp II
Lake Tahoe CC	2-year
Lassen C	2-year
LIFE Bible C	Relig
Life Chiropractic C-West	Hlth
Lincoln U	Bus
Loma Linda U	Doc II
Long Beach City C	2-year
Los Angeles Baptist C	LA II
Los Angeles C of Chiropractic	Hlth
Los Angeles CC District	
East Los Angeles C	2-year
Los Angeles City C	2-year
Los Angeles Harbor C	2-year
Los Angeles Mission C	2-year
Los Angeles Pierce C	2-year
Los Angeles Southwest C	2-year
Los Angeles Trade-Technical C	2-year
Los Angeles Valley C	2-year
West Los Angeles C	2-year

How Classifications Were Determined: Text of the Category Definitions

The 1987 Carnegie classification includes all colleges and universities in the United States listed in the 1985-86 ***Higher Education General Information Survey of Institutional Characteristics.***

It groups institutions into categories on the basis of the level of degree offered—ranging from prebaccalaureate to the doctorate—and the comprehensiveness of their missions.

The categories are as follows:

Research universities I: These institutions offer a full range of baccalaureate programs, are committed to graduate education through the doctorate degree and give high priority to research. They receive annually at least $33.5-million in federal support for research and development[1] and award at least 50 Ph.D. degrees each year.[2]

Research universities II: These institutions offer a full range of baccalaureate programs, are committed to graduate education through the doctorate degree, and give high priority to research. They receive annually between $12.5-million and $33.5-million in federal support for research and development[1] and award at least 50 Ph.D. degrees each year.[2]

Doctorate-granting universities I: In addition to offering a full range of baccalaureate programs, the mission of these institutions includes a commitment to graduate education through the doctorate degree. They award at least 40 Ph.D. degrees annually in five or more academic disciplines.[2]

Doctorate-granting universities II: In addition to offering a full range of baccalaureate programs, the mission of these institutions includes a commitment to graduate education through the doctorate degree. They award annually 20 or more Ph.D. degrees in at least one discipline or 10 or more Ph.D. degrees in three or more disciplines.[2]

Comprehensive universities and colleges I: These institutions offer baccalaureate programs and, with few exceptions, graduate education through the master's degree. More than half of their baccalaureate degrees are awarded in two or more occupational or professional disciplines such as engineering or business administration.[3] All of the institutions in this group enroll at least 2,500 full-time students.[4]

Comprehensive colleges and universities II: These institutions award more than half of their baccalaureate degrees in two or more occupational or professional disciplines, such as engineering or business administration, and many also offer graduate education through the master's degree.[3] All of the colleges and universities in this group enroll between 1,500 and 2,500 full-time students.[4]

Liberal arts colleges I: These highly selective institutions[5] are primarily undergraduate colleges that award more than half of their baccalaureate degrees in arts and science fields.[3]

Liberal arts colleges II: These institutions are primarily undergraduate colleges that are less selective[5] and award more than half their degrees in liberal arts fields.[3] This category also includes a group of colleges (identified with an asterisk) that award *less* than half of their degrees in liberal arts fields but, with fewer than 1,500 students, are too small to be considered comprehensive.

Two-year colleges and institutes: These institutions offer certificate or degree programs through the Associate of Arts level and, with few exceptions, offer no baccalaureate degrees.

Professional schools and other specialized institutions: These institutions offer degrees ranging from the bachelor's to the doctorate. At least 50 per cent of the degrees awarded by these institutions[2] are in a single specialized field.

Specialized institutions include:

Theological seminaries, Bible colleges, and other institutions offering degrees in religion. This category includes institutions where the primary purpose of the institution is to offer religious instruction or train members of the clergy.

Medical schools and medical centers. These institutions award most of their professional degrees in medicine. In some instances, their programs include other health professional schools, such as dentistry, pharmacy, or nursing.[6]

Other separate health profession schools. Institutions in this category award most of their degrees in such fields as chiropractory, pharmacy, or podiatry.

Schools of law. The schools included in this category award most of their degrees in law. The list includes only institutions that are listed as separate campuses in the *Higher Education General Information Survey.*

Schools of engineering and technology. The institutions in this category award at least a bachelor's degree in programs limited almost exclusively to technical fields of study.

Schools of business and management. The schools in this category award most of their bachelor's or graduate degrees in business or business-related programs.

Schools of art, music, and design. Institutions in this category award most of their bachelor's or graduate degrees in art, music, design, architecture, or some combination of such fields.

Teachers colleges. Institutions in this category award most of their bachelor's or graduate degrees in education or education-related fields.

Other specialized institutions. Institutions in this category include graduate centers, maritime academies, military institutes without liberal arts programs, and institutions that do not fit any other classification category.

Corporate colleges and universities. These institutions are accredited, degree-granting colleges and universities established by profit-making corporations.[7]

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[1] The years used in calculating average federal support for research and development were 1983, 1984, and 1985.

[2] The academic year for determining the number of degrees awarded by institutions was 1983-84.

[3] The liberal arts disciplines include area studies, biological science, the fine arts, foreign languages, letters, mathematics, physical sciences, psychology, the social sciences, and interdisciplinary studies. Occupational/preprofessional disciplines include agriculture, the natural sciences, architecture and environmental design, business and management, communications, computer and information science, education, engineering, the health professions, home economics, law, library science, public affairs, and theology.

[4] The years used for calculating average student enrollment were 1982, 1983, and 1984.

[5] An index developed by Alexander W. Astin at the University of California at Los Angeles is used to determine the selectivity of liberal arts colleges.

[6] This category lists only institutions that appear in Higher Education General Information Survey as separate campuses. Those seeking a complete listing of accredited professional schools should consult publications of the separate professional associations, such as the annual report on medical education published by the American Medical Association.

[7] Our list of corporate colleges and universities is taken from Eurich, Nell P., Corporate Classrooms: The Learning Business (Princeton, N.J., The Carnegie Foundation for the Advancement of Teaching, 1985). Since that report was published some of the institutions it included have become independent or part of other institutions.

FIRST UPDATE IN 11 YEARS

Colleges Increased Vocational and Graduate Offerings, Study Shows

PRINCETON, N.J.

A new classification of colleges and universities reveals what many higher-education observers had suspected—that institutions have expanded their offerings in graduate and vocational areas to meet the demand for career training.

The 1987 Carnegie Classification of Higher Education, prepared by the Carnegie Foundation for the Advancement of Teaching, groups the nation's nearly 3,400 colleges and universities into 10 categories, based on the level of degrees they award, the fields in which the degrees are conferred, and, in some categories, enrollment, federal research support, and selectivity of admissions criteria. (See definitions on Page 22.)

The classification system, which was created in 1970 and last updated in 1976, is widely used by college administrators, education researchers, grant makers, and government officials. A foundation, for example, might limit its grants to colleges in a particular category, and a researcher might compare enrollment trends across categories.

The 1987 classification shows that in an era when retrenchment was widely predicted, higher education is "alive and well," said Ernest L. Boyer, president of the foundation. Since 1976, college enrollment has increased 10 per cent and the number of institutions has jumped from 3,072 to 3,389. Those categories showing the greatest growth were two-year colleges and institutions that specialize in vocational fields and in religion.

In broad terms, the classification shows an "upward drift" since 1976, said Mr. Boyer, with growth in the categories of research and doctorate-granting universities.

Liberal-Arts Colleges Stable

The number of less-selective liberal-arts colleges declined slightly, and many institutions in that group award fewer than half their degrees in the liberal arts but are too small to be considered "Comprehensive."

Despite the move to career training, Mr. Boyer noted that the number of highly selective liberal-arts colleges had remained stable, and their enrollments had grown over all. "Colleges with a strong liberal-arts tradition and with great pulling power have not made major curriculum adjustments in response to marketplace demands," he said.

Since its last classification the foundation has dropped from its list of categories "Non-traditional Institutions" and added "Corporate Colleges." Mr. Boyer suggested that in the last decade experimental colleges had become part of the mainstream, and that "to some extent, corporate colleges have been the innovative ones."

Mr. Boyer emphasized that the classification is not an indicator of quality. "It's not an attempt to accredit or rate, but to disaggregate," he said. "This is not a ranking of colleges based on quality. Our aim is to be fair based on our criteria. We're not playing God. We're not jockeying colleges around."

The classification system has proved controversial. In 1976, the American Council on Education agreed to take over the updating of the list, but returned the project to the Carnegie Foundation about five years later, Mr. Boyer said. "There are pressures when you're in a position to determine the classification," said Mr. Boyer, who noted that institutions can and do push to be in a particular category. "A.C.E. felt vulnerable as a membership organization," he said. "A.C.E.'s point was quite correct, and I think the classification belongs in the Carnegie organization."

In a more recent controversy, *U.S. News & World Report* in 1985 used the foundation's preliminary groupings as the basis for its survey of America's best colleges, in which 1,300 college presidents were given a list of institutions similar to their own and asked to select the top ones. Bryn Mawr College and Wesleyan University, both ranked among the top 10 "national liberal-arts colleges" in the magazine's 1983 poll, disappeared from that list in the 1985 survey. Because they awarded doctoral degrees, they were no longer classified as selective liberal-arts colleges.

Footnote for 3 Institutions

In revising that preliminary list, the foundation placed Bryn Mawr and Wesleyan, along with Drew University, as "Liberal Arts I" colleges but added a footnote saying the institutions also met the criteria for "Doctorate- Granting University II" but were not so listed because of their "liberal-arts tradition."

The classification will be published later this year by Princeton University Press. It is also available on computer tape for $50 prepaid from the Carnegie Foundation for the Advancement of Teaching, 5 Ivy Lane, Princeton, N.J. 08540.

CALIFORNIA—Continued

Los Rios CC District	
American River C	2-year
Cosumnes River C	2-year
Sacramento City C	2-year
Loyola Marymount U	Comp I
Marymount Palos Verdes C	2-year
Mendocino C	2-year
Menlo C	Bus
Mennonite Brethren Biblical Sem	Relig
Merced C	2-year
Mills C	LA I
Mira Costa C	2-year
Modesto JC	2-year
Monterey Inst of Int'l Studies	Other
Monterey Peninsula C	2-year
Mount Saint Mary's C*	LA II
Mount San Antonio C	2-year
Mount San Jacinto C	2-year
Napa Valley C	2-year
National Tech Schs	2-year
National U	Comp I
New C of California	LA II
Northrop U	Corp
Occidental C	LA I
Ohlone C	2-year
Otis Art Inst of Parsons Sch of Design	Art
Pacific Christian C*	LA II
Pacific Coast Baptist Bible C	Relig
Pacific Coast JC	2-year
Pacific Grad Sch of Psychology	Other
Pacific Lutheran Theol Seminary	Relig
Pacific Oaks C	Other
Pacific Sch of Religion	Relig
Pacific Union C*	LA II
Palmer C of Chiropractic-West	Hlth
Palo Verde C	2-year
Palomar C	2-year
Pasadena City C	2-year
Pasadena C of Chiropractic	Hlth
Patten C	Relig
Pepperdine U	Doc II
Peralta CC District	
C of Alameda	2-year
Feather River C	2-year
Laney C	2-year
Merritt C	2-year
Vista C	2-year
Pitzer C	LA I
Point Loma Nazarene C	Comp II
Pomona C	LA I
Porterville C	2-year
Queen of the Holy Rosary C	2-year
Rand Grad Sch of Policy Studies	Corp
Rio Hondo C	2-year
Riverside City C	2-year
Saddleback C	2-year
Saint John's Seminary C	Relig
St Joseph's C Seminary	LA II
Saint Mary's C of California	Comp I
Saint Patrick's Seminary	Relig
San Bernardino Valley C	2-year
San Diego CC District	
San Diego City C	2-year
San Diego Mesa C	2-year
San Diego Miramar C	2-year
San Francisco Art Inst	Art
San Francisco C of Mortuary Science	2-year
San Francisco CC District	2-year
San Francisco Conservatory of Music	Art
San Francisco Theol Seminary	Relig
San Joaquin Delta C	2-year
San Jose Bible C	Relig
San Jose/Evergreen CC District	
Evergreen Valley C	2-year
San Jose City C	2-year
San Mateo County CC District	
Cañada C	2-year
C of San Mateo	2-year
Skyline C	2-year
Santa Ana C	2-year
Santa Barbara City C	2-year
Santa Monica C	2-year
Santa Rosa JC	2-year
Saybrook Inst	Other
Sch of Theology at Claremont	Relig
Scripps C	LA I
Shasta C	2-year
Sierra CC	2-year
Simpson C*	LA II
Solano CC	2-year
Southern California C*	LA II
Southern California C of Optometry	Hlth
Southern Cal Inst of Architecture	Art
Southwestern C	2-year
Southwestern U Sch of Law	Law
Stanford U	Res I
Starr King Sch for the Ministry	Relig
State Center CC District	
Fresno City C	2-year
Kings River CC	2-year
Taft C	2-year
United States International U	Doc I
U of California	
Berkeley	Res I
Davis	Res I
Hastings C of Law	Law

CALIFORNIA—Continued

U of California	
Irvine	Res I
Los Angeles	Res I
Riverside	Doc I
San Diego	Res I
San Francisco	Res I
Santa Barbara	Res II
Santa Cruz	Doc I
U of Judaism	Relig
U of La Verne	Comp I
U of Redlands	Comp I
U of San Diego	Comp I
U of San Francisco	Doc II
U of Santa Clara	Comp I
U of Southern California	Res I
U of the Pacific	Comp I
U of West Los Angeles	Law
Ventura County CC District	
Moorpark C	2-year
Oxnard C	2-year
Ventura C	2-year
Victor Valley C	2-year
West Coast Christian C	Relig
West Coast U	
Main Campus	Engr
Orange County Center	Engr
West Hills CC	2-year
West Valley Joint CC District	
Mission C	2-year
West Valley C	2-year
Western St U C of Law	
San Diego	Law
Orange County	Law
Westminster Theol Seminary in Cal	Relig
Westmont C	LA I
Whittier C	Comp II
Woodbury U*	LA II
World C West	LA II
Wright Inst	Other
Yeshiva Ohr Elchonon Chabad/ West Coast Talmudical Seminary	Relig
Yeshiva U of Los Angeles	Relig
Yuba C	2-year

COLORADO

Adams St C	Comp II

COLORADO—Continued

Aims CC	2-year
Arapahoe CC	2-year
Auraria CC	2-year
Bel-Rea Inst of Animal Technology	2-year
Blair JC	2-year
Colorado Christian C	LA II
Colorado C	LA I
Colorado Inst of Art	2-year
Colorado Mountain C	2-year
Colorado Northwestern CC	2-year
Colorado Sch of Mines	Doc II
Colorado St U	Res I
Colorado Tech C	Engr
CC of Aurora	2-year
Denver Conservative Baptist Seminary	Relig
Denver Tech C	2-year
Electronic Tech Inst	2-year
Fort Lewis C	Comp I
Front Range CC	2-year
Iliff Sch of Theology	Relig
Lamar CC	2-year
Loretto Heights C*	LA II
Mesa C	LA II
Metropolitan St C	Comp I
Morgan CC	2-year
Naropa Inst	LA II
National Technological U	Corp
Nazarene Bible C	2-year
Northeastern JC	2-year
Otero JC	2-year
Parks C	2-year
Pikes Peak CC	2-year
Pueblo CC	2-year
Red Rocks CC	2-year
Regis C	Comp I
Saint Thomas Seminary	Relig
Tech Trades Inst	2-year
Trinidad St JC	2-year
U of Colorado	
Boulder	Res I
Colorado Springs	Comp I
Denver	Comp I
Health Sciences Center	Med
U of Denver	Doc I
U of Northern Colorado	Doc I
U of Southern Colorado	Comp I
Western St C of Colorado	Comp I
Western Bible C	Relig
Yeshiva Toras Chaim Talmudical Seminary	Relig

CONNECTICUT

Albertus Magnus C	LA II
Asnuntuck CC	2-year
Beth Benjamin Academy of Conn	Relig
Briarwood C	2-year
Bridgeport Engineering Inst	Engr
Charter Oak C	LA II
Connecticut C	LA I
Connecticut St U System	
Central Connecticut St U	Comp I
Eastern Connecticut St U	Comp I
Southern Connecticut St U	Comp I
Western Connecticut St U	Comp I
Fairfield U	Comp I
Greater Hartford CC	2-year
Greater New Haven St Tech C	2-year
Hartford C for Women	2-year
Hartford Graduate Center	Engr
Hartford Seminary	Relig
Hartford St Tech C	2-year
Holy Apostles C	LA II
Housatonic Regional CC	2-year
Manchester CC	2-year
Mattatuck CC	2-year

CONNECTICUT—Continued

Middlesex CC	2-year
Mitchell C	2-year
Mohegan CC	2-year
Mount Sacred Heart C	2-year
Northwestern Connecticut CC	2-year
Norwalk CC	2-year
Norwalk St Tech C	2-year
Paier C of Art Incorporated	Art
Post C	Bus
Quinebaug Valley CC	2-year
Quinnipiac C	Comp I
Sacred Heart U	Comp I
Saint Alphonsus C	Relig
Saint Basil's C	Relig
Saint Joseph C*	LA II
South Central CC	2-year
Thames Valley St Tech C	2-year
Trinity C	LA I
Tunxis CC	2-year
U of Bridgeport	Comp I
U of Connecticut	Res I
Health Center	Med
U of Hartford	Comp I
U of New Haven	Comp I
Waterbury St Tech C	2-year
Wesleyan U **	LA I
Yale U	Res I

DELAWARE

Delaware St C	Comp II
Delaware Tech and CC	
Southern Campus	2-year
Stanton-Wilmington Campus	2-year
Terry Campus	2-year
Goldey Beacom C	Bus
University of Delaware	Res II
Wesley C*	LA II
Wilmington C*	LA II

DISTRICT OF COLUMBIA

American U	Doc I
Benjamin Franklin U	Bus
Catholic U of America	Doc I
Corcoran Sch of Art	Art
De Sales Sch of Theology	Relig
Defense Intelligence C	Other
Dominican House of Studies	Relig
Gallaudet U	LA II
George Washington U	Res II
Georgetown U	Res II
Howard U	Res I
Mount Vernon C*	LA II
Oblate C	Relig
Southeastern U	Bus
Strayer C	Bus
Trinity C*	LA II
U of the District of Columbia	Comp I
Wesley Theological Seminary	Relig

FLORIDA

Art Inst of Fort Lauderdale	2-year
Baptist Bible Inst	Relig
Barry U	Comp I
Bethune Cookman C	Comp II
Brevard CC	2-year
Broward CC	2-year
Central Florida CC	2-year
Chipola JC	2-year
Clearwater Christian C*	LA II
C of Boca Raton	2-year
Daytona Beach CC	2-year
Eckerd C	LA I

** This institution also meets the criteria for Doc II, but is classified LA I because of its liberal-arts tradition.

FLORIDA—Continued

Edison CC	2-year
Edward Waters C*	LA II
Embry-Riddle Aeronautical U	Engr
Flagler C*	LA II
Florida Bible C	Relig
Florida C	2-year
Florida CC at Jacksonville	2-year
Florida Inst of Technology	Doc II
Florida Keys CC	2-year
Florida Memorial C*	LA II
Florida Southern C	Comp I
Fort Lauderdale C	Bus
Gulf Coast CC	2-year
Hillsborough CC	2-year
Hobe Sound Bible C	Relig
Indian River CC	2-year
International Fine Arts C	2-year
ITS Career Inst at Jacksonville	2-year
ITS Career Inst at Miami	2-year
ITT Tech Inst	2-year
Jacksonville U	Comp II
Jones C	Bus
Lake City CC	2-year
Lake-Sumter CC	2-year
Lakeland C of Business	2-year
Manatee CC	2-year
Miami Christian C	LA II
Miami-Dade CC	2-year
Morris JC of Business	2-year
National Education Center Bauder C Campus	2-year
National Education Center Tampa Tech Inst Campus	2-year
New England Inst of Technology at Palm Beach	2-year
North Florida JC	2-year
Nova U	Doc I
Okaloosa-Walton JC	2-year
Orlando C	Bus
Palm Beach Atlantic C	LA II
Palm Beach JC	2-year
Pasco-Hernando CC	2-year
Pensacola JC	2-year
Polk CC	2-year
Ringling Sch of Art and Design	Art
Rollins C	Comp I
Saint John Vianney C Seminary	2-year
Saint Johns River CC	2-year
Saint Leo C	Comp I
Saint Petersburg JC	2-year
Saint Vincent De Paul Regional Seminary	Relig
Saint Thomas U	Comp I
Santa Fe CC	2-year
Seminole CC	2-year
South Florida CC	2-year
Southeastern C of Osteopathic Medicine	Med
Southeastern C of the Assemblies of God	Relig
State U System of Florida	
Florida A&M U	Comp I
Florida Atlantic U	Doc II
Florida International U	Comp I
Florida St U	Res II
U of Central Florida	Comp I
U of Florida	Res I
U of North Florida	Comp I
U of South Florida	Doc II
U of West Florida	Comp I
Stetson U	Comp I
Tallahassee CC	2-year
Talmudic C of Florida	Relig
Tampa C	Bus

Continued on Following Page

Key to Abbreviations

Res I	Research universities I
Res II	Research universities II
Doc I	Doctorate-granting universities I
Doc II	Doctorate-granting universities II
Comp I	Comprehensive universities and colleges I
Comp II	Comprehensive universities and colleges II
LA I	Liberal-arts colleges I
LA II	Liberal-arts colleges II
2-year	Two-year colleges and institutes
Relig	Theological seminaries, Bible colleges, and other institutions offering degrees in religion
Med	Medical schools and medical centers
Hlth	Other separate health-professions schools
Law	Schools of law
Engr	Schools of engineering and technology
Bus	Schools of business and management
Art	Schools of art, music, and design
Teach	Teachers colleges
Other	Other specialized institutions
Corp	Corporate colleges and universities
*	These LA II institutions award fewer than one-half of their degrees in liberal-arts fields but are too small to be classified as comprehensive institutions.

Carnegie Foundation's Classifications of Colleges

FLORIDA—Continued

United Electronics Inst of Florida	2-year
U of Miami	Res I
U of Tampa	Comp II
Valencia CC	2-year
Warner Southern C*	LA II
Webber C	Bus

GEORGIA

Abraham Baldwin Agricultural C	2-year
Agnes Scott C	LA I
Albany JC	2-year
Albany St C	Comp II
Andrew C	2-year
Armstrong St C	Comp I
Art Inst of Atlanta	2-year
Atlanta C of Art	Art
Atlanta Christian C	Relig
Atlanta JC	2-year
Atlanta U	Doc II
Augusta C	Comp I
Bainbridge JC	2-year
Bauder Fashion C, Phipps Plaza	2-year
Berry C*	LA II
Brenau C	Comp II
Brewton-Parker C	2-year
Brunswick JC	2-year
Clark C	Comp II
Clayton St C	2-year
Columbia Theological Seminary	Relig
Columbus C	Comp I
Covenant C*	LA II
Crandall JC	2-year
Dalton JC	2-year
Dekalb CC	2-year
DeVry Inst of Technology	Corp
Draughon's JC	2-year
Emanuel County JC	2-year
Emmanuel C	2-year
Emmanuel C Sch of Christian Ministries	Relig
Emory U	Res II
Floyd JC	2-year
Fort Valley St C	Comp II
Gainesville JC	2-year
Georgia C	Comp I
Georgia Inst of Technology	Res I
Georgia Military C	2-year
Georgia Southern C	Comp I
Georgia Southwestern C	Comp II
Georgia St U	Doc I
Gordon JC	2-year
Gupton Jones C of Funeral Service	2-year
Interdenominational Theol Center	Relig
Kennesaw C	Comp I
La Grange C*	LA II
Life Chiropractic C	Hlth
Macon JC	2-year
Meadows C of Business	2-year
Medical C of Georgia	Med
Mercer U	
Atlanta	Comp II
Macon	Comp I
Southern Sch of Pharmacy	Hlth
Middle Georgia C	2-year
Morehouse C	LA II
Morehouse Sch of Medicine	Med
Morris Brown C*	LA II
North Georgia C	Comp II
Oglethorpe U	LA II
Paine C*	LA II
Phillips C at Augusta	2-year
Phillips C at Columbus	2-year
Piedmont C*	LA II
Reinhardt C	2-year
Savannah C of Art and Design	Art
Savannah St C	Comp II
Shorter C*	LA II
South Georgia C	2-year
Southern Tech Inst	Engr
Spelman C	LA II
Thomas County CC	2-year
Toccoa Falls C	Relig
Truett McConnell C	2-year
U of Georgia	Res I
Valdosta St C	Comp I
Waycross JC	2-year
Wesleyan C	LA II
West Georgia C	Comp I
Young Harris C	2-year

HAWAII

Brigham Young U Hawaii Campus	Comp II
Chaminade U of Honolulu	Comp II
Hawaii Loa C	LA II
Hawaii Pacific C	Comp I
U of Hawaii	
Hilo	Comp I
Manoa	Res I
West Oahu C*	LA II
Honolulu CC	2-year
Kapiolani CC	2-year
Kauai CC	2-year
Leeward CC	2-year
Maui CC	2-year
Windward CC	2-year

IDAHO

Boise Bible C	Relig
Boise St U	Comp I
C of Idaho	LA II
C of Southern Idaho	2-year
Idaho St U	Doc II
Lewis-Clark St C	Comp II
North Idaho C	2-year
Northwest Nazarene C*	LA II
Ricks C	2-year
U of Idaho	Doc II

ILLINOIS

Alfred Adler Inst of Chicago	Other
Allied Inst of Technology	2-year
American Academy of Art	2-year
American Conservatory of Music	Art
American Islamic C	Relig
Augustana C	Comp II
Aurora U*	LA II
Barat C	LA I
Belleville Area C	2-year
Bethany Theological Seminary	Relig
Black Hawk CC District	
East Campus	2-year
Quad-Cities Campus	2-year
Blackburn C	LA I
Bradley U	Comp I

ILLINOIS—Continued

Brisk Rabbinical C	Relig
Carl Sandburg C	2-year
Catholic Theological Union	Relig
Chicago C of Osteopathic Med	Med
Chicago Sch of Professional Psych	Other
Chicago St U	Comp I
Chicago Theological Seminary	Relig
Christ Seminary-Seminex	Relig
City C's of Chicago	
Chicago City-Wide C	2-year
Harry S Truman C	2-year
Kennedy-King C	2-year
Loop C	2-year
Malcolm X C	2-year
Olive-Harvey C	2-year
Richard J Daley C	2-year
Wilbur Wright C	2-year
C of Du Page	2-year
C of Lake County	2-year
C of Saint Francis	Comp I
Columbia C*	LA II
Concordia C*	LA II
Danville Area CC	2-year
De Lourdes C	Teach
De Paul U	Comp I
DeVry Inst of Tech at Chicago	Corp
DeVry Inst of Tech at Lombard	Corp
Dr William M Scholl C of Podiatric Medicine	Hlth
East-West U	2-year
Eastern Illinois U	Comp I
Elgin CC	2-year
Elmhurst C	Comp I
Eureka C*	LA II
Felician C	2-year
Forest Inst of Professional Psych	Other
Garrett-Evangelical Theological Seminary	Relig
Gem City C	2-year
Governors St U	Comp I
Greenville C*	LA II
Harrington Inst of Interior Design	Art
Hebrew Theological C	Relig
Highland CC	2-year
Illinois Benedictine C	Comp II
Illinois Central C	2-year
Illinois C*	LA II
Illinois C of Optometry	Hlth
Illinois Eastern CC's	
Frontier CC	2-year
Lincoln Trail C	2-year
Olney Central C	2-year
Wabash Valley C	2-year
Illinois Inst of Technology	Doc I
Ill Sch of Professional Psychology	Other
Illinois St U	Doc II
Illinois Tech C	2-year
Illinois Valley CC	2-year
Illinois Wesleyan U	Comp II
Industrial Management Inst	Corp
John A Logan C	2-year
John Marshall Law Sch	Law
John Wood CC	2-year
Joliet JC	2-year
Judson C	LA II
Kankakee CC	2-year
Kaskaskia C	2-year
Keller Grad Sch of Management	Bus
Kendall C*	LA II
Kishwaukee C	2-year
Knox C	LA I
Lake Forest C	LA I
Lake Forest Sch of Management	Bus

ILLINOIS—Continued

Lake Land C	2-year
Lewis and Clark CC	2-year
Lewis U	Comp I
Lincoln Christian C	Relig
Lincoln C	2-year
Lincoln Land CC	2-year
Loyola U of Chicago	Doc I
Lutheran Sch of Theol Chicago	Relig
Mac Cormac JC	2-year
MacMurray C	LA I
Mallinckrodt C	Bus
Mc Henry County C	2-year
Mc Kendree C*	LA II
McCormick Theological Seminary	Relig
McDonald's Management Inst	Corp
Meadville-Lombard Theol Sch	Relig
Mennonite C of Nursing	Hlth
Metropolitan Business C	2-year
Midstate C	2-year
Midwest C of Engineering	Engr
Millikin U	Comp II
Monmouth C*	LA II
Moody Bible Inst	Relig
Moraine Valley CC	2-year
Morrison Inst of Technology	2-year
Morton C	2-year
Mundelein C*	LA II
NAES C	2-year
National C of Chiropractic	Hlth
National C of Education	Comp I
North Central C	Comp II
North Park C and Theol Seminary	LA II
Northeastern Illinois U	Comp I
Northern Baptist Theol Seminary	Relig
Northern Illinois U	Doc I
Northwestern U	Res I
Oakton CC	2-year
Olivet Nazarene C	Comp II
Parkland C	2-year
Prairie St C	2-year
Principia C	LA I
Quincy C*	LA II
Rend Lake C	2-year
Richland CC	2-year
Robert Morris C	2-year
Rock Valley C	2-year
Rockford C	LA I
Roosevelt U	Comp I
Rosary C	Comp II
Rush U	Med
Saint Augustine C	2-year
Saint Mary of the Lake Seminary	Relig
Saint Xavier C	Comp II
Sangamon St U	Comp I
Sauk Valley CC	2-year
Sch of the Art Inst of Chicago	Art
Seabury-Western Theol Seminary	Relig
Shawnee C	2-year
Shimer C	Other
Southeastern Illinois C	2-year
Southern Illinois U	
Carbondale	Res II
Edwardsville	Comp I
Spertus C of Judaica	LA II
Spoon River C	2-year
Springfield C in Illinois	2-year
St CC of East St Louis	2-year
Telshe Yeshiva-Chicago	Relig
Thornton CC	2-year
Trinity Christian C	LA II
Trinity C	LA II
Trinity Evangelical Divinity Sch	Relig
Triton C	2-year

ILLINOIS—Continued

U of Chicago	Res I
U of Heath Sciences Chicago Medical Sch	Med
U of Illinois	
Chicago	Res I
Urbana-Champaign	Res I
VanderCook C of Music	Art
Waubonsee CC	2-year
West Suburban C of Nursing	Hlth
Western Illinois U	Comp I
Wheaton C	LA I
William Rainey Harper C	2-year

INDIANA

Ancilla C	2-year
Anderson C	Comp II
Ball St U	Doc I
Bethel C*	LA II
Butler U	Comp I
Calumet C*	LA II
Christian Theological Seminary	Relig
Clark C	2-year
Concordia Theological Seminary	Relig
De Pauw U	LA I
Earlham C	LA I
Fort Wayne Bible C	Relig
Franklin C of Indiana*	LA II
Goshen Biblical Seminary	Relig
Goshen C*	LA II
Grace C*	LA II
Grace Theological Seminary	Relig
Hanover C	LA II
Huntington C*	LA II
Indiana Inst of Technology	Engr
Indiana St U	
Main Campus	Doc II
Evansville Campus	Comp I
Indiana U	
Bloomington	Res I
East	2-year
Kokomo	Comp I
Northwest	Comp I
Purdue U at Fort Wayne	Comp I
Purdue U at Indianapolis	Comp I
South Bend	Comp I
Southeast	Comp I
Indiana Voc Tech C	
Central Indiana	2-year
Columbus	2-year
Kokomo	2-year
Lafayette	2-year
Eastcentral	2-year
Northcentral	2-year
Northeast	2-year
Northwest	2-year
Southcentral	2-year
Southeast	2-year
Southwest	2-year
Wabash Valley	2-year
Whitewater	2-year
International Business C	2-year
Interstate Tech Inst	2-year
ITT Tech Inst at Evansville	2-year
ITT Tech Inst at Fort Wayne	2-year
ITT Tech Inst at Indianapolis	2-year
Lockyear C	2-year
Manchester C*	LA II
Marian C*	LA II
Marion C*	LA II
Martin Center C*	LA II
Mennonite Biblical Seminary	Relig
Mid-America C of Funeral Service	2-year
Oakland City C*	LA II
Purdue U	
Main Campus	Res I
Calumet	Comp I
North Central	Comp I

INDIANA—Continued

Rose-Hulman Inst of Technology	Engr
Saint Francis C*	LA II
Saint Joseph's C*	LA II
Saint Mary's C	Comp II
Saint Mary-of-the-Woods C	LA II
Saint Meinrad C	LA II
Saint Meinrad Sch of Theology	Relig
Taylor U*	LA II
Tri-State U*	LA II
U of Evansville	Comp I
U of Indianapolis	Comp I
U of Notre Dame	Doc I
Valparaiso U	Comp I
Vincennes U	2-year
Wabash C	LA I

IOWA

American Inst of Business	2-year
Briar Cliff C*	LA II
Buena Vista C	Comp II
Central U of Iowa	Comp II
Clarke C*	LA II
Coe C	LA I
Cornell C	LA I
Des Moines Area CC	2-year
Divine Word C	LA II
Dordt C*	LA II
Drake U	Doc II
Eastern Iowa CC District	
Clinton CC	2-year
Muscatine CC	2-year
Scott CC	2-year
Ellsworth CC	2-year
Faith Baptist Bible C and Seminary	Relig
Graceland C*	LA II
Grand View C*	LA II
Grinnell C	LA I
Hamilton Tech C	2-year
Hawkeye Inst of Technology	2-year
Indian Hills CC	2-year
Iowa Central CC	2-year
Iowa Lakes CC	2-year
Iowa St U	Res II
Iowa Wesleyan C*	LA II
Iowa Western CC	2-year
Kirkwood CC	2-year
Lincoln Tech Inst	2-year
Loras C	Comp II
Luther C	Comp II
Maharishi International U	LA II
Marshalltown CC	2-year
Marycrest C	Comp II
Morningside C*	LA II
Mount Mercy C*	LA II
Mount Saint Clare C	Bus
National Education Center National Inst of Tech Campus	2-year
North Iowa Area CC	2-year
Northeast Iowa Tech Inst	2-year
Northwest Iowa Tech C	2-year
Northwestern C*	LA II
Open Bible C	Relig
Palmer C of Chiropractic	Hlth
St Ambrose C	Comp II
Simpson C	LA II
Southeastern CC	2-year
Southwestern CC	2-year
U of Dubuque-C of Liberal Arts*	LA II
U of Iowa	Res I
U of Northern Iowa	Comp I
U of Osteopathic Medicine and Health Sciences	Med
Upper Iowa U*	LA II
Vennard C	Relig
Waldorf C	2-year
Wartburg C	LA I
Wartburg Theological Seminary	Relig
Western Iowa Tech CC	2-year
Westmar C*	LA II
William Penn C*	LA II

KANSAS

Allen County CC	2-year
Baker U*	LA II
Barton County CC	2-year
Benedictine C	LA II
Bethany C*	LA II
Bethel C*	LA II
Butler County CC	2-year
Central Baptist Theol Seminary	Relig
Central C	2-year
Cloud County CC	2-year
Coffeyville CC	2-year
Colby CC	2-year
Cowley County CC	2-year
Dodge City CC	2-year
Donnelly C	2-year
Emporia St U	Comp I
Fort Scott CC	2-year
Fort Hays St U	Comp I
Friends Bible C	Relig
Friends U*	LA II
Garden City CC	2-year
Haskell Indian JC	2-year
Hesston C	2-year
Highland CC	2-year
Hutchinson CC	2-year
Independence CC	2-year
Johnson County CC	2-year
Kansas City C Bible Sch	Relig
Kansas City Kansas CC	2-year
Kansas Newman C*	LA II
Kansas St U	Res II
Kansas Tech Inst	2-year
Kansas Wesleyan*	LA II
Labette CC	2-year
Manhattan Christian C	Relig
Marymount C of Kansas*	LA II
Mc Pherson C*	LA II
Mid-America Nazarene C*	LA II
Neosho County CC	2-year
Ottawa U	Comp II
Pittsburg St U	Comp I
Pratt CC	2-year
Saint Mary C*	LA II
Saint Mary of the Plains C*	LA II
Seward County CC	2-year
Southwestern C*	LA II
Sterling C*	LA II
Tabor C*	LA II
U of Kansas	
Main Campus	Res II
Medical Center	Med
Washburn U of Topeka	Comp I
Wichita St U	Comp I

KENTUCKY

Alice Lloyd C*	LA II
Asbury C*	LA II

Summaries by Number of Institutions and Enrollment

Institutions

	Number			Per cent	
	Public	Private	Total	Public	Private
Research universities I	45	25	70	64.3%	35.7%
Research universities II	26	7	33	78.8%	21.2%
Doctorate-granting universities I	29	22	51	56.9%	43.1%
Doctorate-granting universities II	34	25	59	57.6%	42.4%
Total	134	79	213	62.9%	37.1%
Comprehensive institutions I	285	142	427	66.7%	33.3%
Comprehensive institutions II	47	127	174	27.0%	73.0%
Total	332	269	601	55.2%	44.8%
Liberal-arts colleges I	1	124	125	0.8%	99.2%
Liberal-arts colleges II	30	409	439	6.8%	93.2%
Total	31	533	564	5.5%	94.5%
2-year institutions	985	383	1,368	72.0%	28.0%
Specialized institutions	66	577	643	10.2%	89.8%
Total	**1,548**	**1,841**	**3,389**	**45.7%**	**54.3%**

Enrollment

	Number			Per cent	
	Public	Private	Total	Public	Private
Research universities I	1,258,000	321,000	1,579,000	79.7%	20.3%
Research universities II	541,000	78,000	619,000	87.4%	12.6%
Doctorate-granting universities I	467,000	195,000	662,000	70.5%	29.5%
Doctorate-granting universities II	389,000	179,000	568,000	68.5%	31.5%
Total	2,655,000	773,000	3,428,000	77.4%	22.6%
Comprehensive institutions I	2,272,000	697,000	2,969,000	76.5%	23.5%
Comprehensive institutions II	97,000	240,000	337,000	28.7%	71.3%
Total	2,369,000	937,000	3,306,000	71.7%	28.3%
Liberal-arts colleges I	4,000	187,000	191,000	2.0%	98.0%
Liberal-arts colleges II	49,000	342,000	391,000	12.6%	87.4%
Total	53,000	529,000	582,000	9.2%	90.8%
2-year institutions	4,250,000	268,000	4,518,000	94.1%	5.9%
Specialized institutions	131,000	338,000	469,000	27.9%	72.1%
Total	**9,458,000**	**2,845,000**	**12,303,000**	**76.9%**	**23.1%**

KENTUCKY—Continued

Asbury Theological Seminary	Relig
Bellarmine C	Comp I
Berea C	Comp II
Bowling Green JC of Business	2-year
Brescia C*	LA II
Campbellsville C*	LA II
Centre C of Kentucky	LA I
Cumberland C	Comp II
Draughon's JC of Business	2-year
Eastern Kentucky U	Comp I
Georgetown C*	LA II
Inst of Electronic Technology	2-year
Kentucky Christian C	Relig
Kentucky C of Business	2-year
Kentucky St U	Comp II
Kentucky Wesleyan C*	LA II
Lees C	2-year
Lexington Theological Seminary	Relig
Lindsey Wilson C	2-year
Louisville Presbyterian Theological Seminary	Relig
Louisville Tech Inst	2-year
Mid-Continent Baptist Bible C	Relig
Midway C	2-year
Morehead St U	Comp I
Murray St U	Comp I
National Education Center	
Ky C of Technology Campus	2-year
Northern Kentucky U	Comp I
Owensboro JC of Business	2-year
Pikeville C*	LA II
Saint Catharine C	2-year
Southern Baptist Theol Seminary	Relig
Spalding U*	LA II
Sue Bennett C	2-year
Sullivan JC of Business	2-year
Thomas More C	LA I
Transylvania U	LA II
Union C*	LA II
U of Kentucky	Res I
Ashland CC	2-year
Elizabethtown CC	2-year
Hazard CC	2-year
Henderson CC	2-year
Hopkinsville CC	2-year
Jefferson CC	2-year
Lexington CC	2-year
Madisonville CC	2-year
Maysville CC	2-year
Paducah CC	2-year
Prestonburg CC	2-year
Somerset CC	2-year
Southeast CC	2-year
U of Louisville	Doc I
Watterson C	Corp
Western Kentucky U	Comp I

LOUISIANA

Bossier Parish CC	2-year
Centenary C of Louisiana	LA I
Delgado CC	2-year
Dillard U*	LA II
Grambling St U	Comp I
Louisiana C*	LA II
Louisiana St U System	
Louisiana St U and A&M C	Res I
Alexandria	2-year
Eunice	2-year
Medical Center	Med
Shreveport	Comp I
Louisiana Tech U	Doc II
Loyola U	Comp I
McNeese St U	Comp I
New Orleans Baptist Theological Seminary	Relig
Nicholls St U	Comp I
Northeast Louisiana U	Comp I
Northwestern St U of Louisiana	Comp I
Notre Dame Seminary Graduate Sch of Theology	Relig
Our Lady of Holy Cross C	Comp II
Phillips JC Mississippi Gulf Coast	2-year
Saint Bernard Parish CC	2-year
Saint Joseph Seminary C	LA II
Saint Mary's Dominican C*	LA II
Southeastern Louisiana U	Comp I
Southern U	
Main Campus	Comp I
New Orleans	Comp I
Shreveport-Bossier City Campus	2-year
Tulane U of Louisiana	Doc I
U of New Orleans	Doc II
U of Southwestern Louisiana	Comp I
Xavier U of Louisiana	Comp II

MAINE

Andover C	2-year
Bangor Theological Seminary	Relig
Bates C	LA I
Beal C	2-year
Bowdoin C	LA I
Casco Bay C	2-year
Central Maine Medical Center Sch of Nursing	2-year
Central Maine Voc-Tech Inst	2-year
Colby C	LA I
C of the Atlantic	LA II
Eastern Maine Voc-Tech Inst	2-year
Husson C	Bus

MAINE—Continued

Kennebec Valley Voc-Tech Inst	2-year
Maine Maritime Academy	Other
Northern Maine Voc-Tech Inst	2-year
Portland Sch of Art	Art
Saint Joseph's C	Comp I
Southern Maine Voc-Tech Inst	2-year
Thomas C	Bus
Unity C	LA II
U of Maine	
Augusta	2-year
Farmington	Comp II
Fort Kent	LA II
Machias*	LA II
Orono	Doc II
Presque Isle	LA II
U of Southern Maine	Comp I
U of New England*	LA II
Westbrook C*	LA II
YDI Schs	2-year

MARYLAND

Allegany CC	2-year
Anne Arundel CC	2-year
Baltimore Hebrew C	Relig
Bowie St C	Comp II
Capitol Inst of Technology	Engr
Catonsville CC	2-year
Cecil CC	2-year
Charles County CC	2-year
Chesapeake C	2-year
C of Notre Dame of Maryland	Comp II
Columbia Union C*	LA II
CC of Baltimore	2-year
Coppin St C	Comp II
Dundalk CC	2-year
Eastern Christian C	Relig
Essex CC	2-year
Frederick CC	2-year
Frostburg St C	Comp I
Garrett CC	2-year
Goucher C	LA I
Hagerstown Business C	2-year
Hagerstown JC	2-year
Harford CC	2-year
Hood C	Comp II
Howard CC	2-year
Johns Hopkins U	Res I
Loyola C	Comp I
Maryland C of Art and Design	2-year
Maryland Inst C of Art	Art
Montgomery C	
Germantown	2-year
Rockville	2-year
Takoma Park	2-year
Morgan St U	Comp I
Mount Saint Mary's C	Comp II
Ner Israel Rabbinical C	Relig
Peabody Inst of Johns Hopkins U	Art
Prince Georges CC	2-year
St John's C	LA I
Saint Mary's C of Maryland	LA II
Saint Mary's Seminary and U	Relig
Salisbury St C	Comp I
Sojourner-Douglass C	Other
Towson St U	Comp I
Uniformed Services U of the Health Sciences	Med
U of Baltimore	Comp I
U of Maryland	
Baltimore	Med
Baltimore County	Doc II
College Park	Res I
Eastern Shore*	LA II
Villa Julie C	2-year
Washington Bible C	Relig
Washington C	LA I
Washington Theological Union	Relig
Western Maryland C	LA I
Wor-Wic Tech CC	2-year

MASSACHUSETTS

American Inst of Banking	Corp
American International C	Comp II
Amherst C	LA I
Andover Newton Theological Sch	Relig
Anna Maria C	Comp II
Aquinas JC at Milton	2-year
Aquinas JC at Newton	2-year
Arthur D Little Management Ed Inst	Corp
Assumption C	Comp I
Atlantic Union C*	LA II
Babson C	Bus
Bay Path JC	2-year
Bay St JC of Business	2-year
Becker JC	
Leicester	2-year
Worcester	2-year
Bentley C	Bus
Berklee C of Music	Art
Berkshire Christian C	Relig
Blue Hills Tech Inst	2-year
Boston Architectural Center	Corp
Boston C	Doc I
Boston Conservatory	Art
Boston U	Res I
Bradford C	LA II
Brandeis U	Res II
Cambridge C	Other

Key to Abbreviations

Res I	Research universities I
Res II	Research universities II
Doc I	Doctorate-granting universities I
Doc II	Doctorate-granting universities II
Comp I	Comprehensive universities and colleges I
Comp II	Comprehensive universities and colleges II
LA I	Liberal-arts colleges I
LA II	Liberal-arts colleges II
2-year	Two-year colleges and institutes
Relig	Theological seminaries, Bible colleges, and other institutions offering degrees in religion
Med	Medical schools and medical centers
Hlth	Other separate health-professions schools
Law	Schools of law
Engr	Schools of engineering and technology
Bus	Schools of business and management
Art	Schools of art, music, and design
Teach	Teachers colleges
Other	Other specialized institutions
Corp	Corporate colleges and universities
*	These LA II institutions award fewer than one-half of their degrees in liberal-arts fields but are too small to be classified as comprehensive institutions.

Comparison with Previous Classifications

Institutions

	Number			Per cent		
	1970	1976	1987	1970	1976	1987
Research universities I	52	51	70	1.8%	1.7%	2.1%
Research universities II	40	47	33	1.4%	1.5%	1.0%
Doctorate-granting universities I	53	56	51	1.9%	1.8%	1.5%
Doctorate-granting universities II	28	30	59	1.0%	1.0%	1.7%
Comprehensive institutions I	323	381	427	11.4%	12.4%	12.6%
Comprehensive institutions II	133	213	174	4.7%	6.9%	5.1%
Liberal-arts colleges I	146	123	125	5.1%	4.0%	3.7%
Liberal-arts colleges II	575	460	439	20.3%	15.0%	12.9%
2-year institutions	1,063	1,146	1,368	37.5%	37.3%	40.4%
Specialized institutions	424	559	643	14.9%	18.2%	19.0%
Total	**2,837**	**3,072**	**3,389**	**100.0%**	**100.0%**	**100.0%**

Enrollment

	Number			Per cent		
	1970	1976	1987	1970	1976	1987
Research universities I	1,097,000	1,144,000	1,579,000	12.9%	10.2%	12.8%
Research universities II	611,000	803,000	619,000	7.2%	7.2%	5.0%
Doctorate-granting universities I	641,000	805,000	662,000	7.5%	7.2%	5.3%
Doctorate-granting universities II	325,000	304,000	568,000	3.8%	2.7%	4.6%
Comprehensive institutions I	2,114,000	2,628,000	2,969,000	24.8%	23.5%	24.1%
Comprehensive institutions II	405,000	542,000	337,000	4.7%	4.9%	2.7%
Liberal-arts colleges I	188,000	154,000	191,000	2.2%	1.4%	1.5%
Liberal-arts colleges II	502,000	377,000	391,000	5.9%	3.4%	3.2%
2-year institutions	2,347,000	3,978,000	4,518,000	27.5%	35.6%	36.7%
Specialized institutions	290,000	416,000	469,000	3.4%	3.7%	3.8%
Total	**8,520,000**	**11,165,000**	**12,303,000**	**100.0%**	**100.0%**	**100.0%**

Note: Percentages may not add to totals because of rounding. Totals for 1976 include a category for nontraditional institutions not shown above.

MASSACHUSETTS—Continued

Central New England C	Engr
Worcester JC	2-year
Chamberlayne JC	2-year
Clark U	Doc II
C of Our Lady of the Elms*	LA II
C of the Holy Cross	LA I
Conway Sch of Landscape Design	Art
Curry C*	LA II
Dean JC	2-year
Eastern Nazarene C*	LA II
Emerson C	Comp II
Emmanuel C	LA I
Endicott C	2-year
Episcopal Divinity Sch	Relig
Fisher JC	2-year
Forsyth Sch of Dental Hygienists	2-year
Franklin Inst of Boston	2-year
Gordon C	LA I
Gordon-Conwell Theol Seminary	Relig
Hampshire C	LA I
Harvard U	Res I
Hebrew C	Relig
Hellenic C-Holy Cross Greek Orthodox Sch of Theology	LA II
Katharine Gibbs Sch	2-year
Laboure C	2-year
Lasell JC	2-year
Lesley C	Comp I
Marian Court JC	2-year
Massachusetts Board of Regents	
Southeastern Massachusetts U	Comp I
U of Lowell	Comp I
U of Massachusetts	
Amherst	Res II
Boston	Comp I
Medical Sch at Worcester	Med
Bridgewater St C	Comp I
Fitchburg St C	Comp I
Framingham St C	Comp I
Massachusetts C of Art	Art
Massachusetts Maritime Academy	Other
North Adams St C	Comp I
Salem St C	Comp I
Westfield St C	Comp I
Worcester St C	Comp I
Berkshire CC	2-year
Bristol CC	2-year
Bunker Hill CC	2-year
Cape Cod CC	2-year
Greenfield CC	2-year
Holyoke CC	2-year
Massachusetts Bay CC	2-year
Massasoit CC	2-year
Middlesex CC	2-year
Mount Wachusett CC	2-year
North Shore CC	2-year
Northern Essex CC	2-year
Quinsigamond CC	2-year
Roxbury CC	2-year
Springfield Tech CC	2-year
Massachusetts C of Pharmacy and Allied Health Sciences	Hlth
Massachusetts Inst of Technology	Res I
Mass Sch of Professional Psych	Other
Merrimack C	Comp I
MGH Inst of Health Professions	Corp
Mount Holyoke C	LA I
Mount Ida C*	LA II
New England C of Optometry	Hlth
New England Conserv of Music	Art
New England Inst of Applied Arts and Sciences	2-year
New England Sch of Law	Law
Newbury JC	2-year
Nichols C	Bus
Northeastern U	Doc II
Pine Manor C	LA II
Pope John XXIII National Seminary	Relig
Quincy JC	2-year
Radcliffe C	LA I
Regis C	LA I
Saint Hyacinth C-Seminary	Relig
Saint John's Seminary	Relig
Sch of the Museum of Fine Arts at Boston	Art

MASSACHUSETTS—Continued

Simmons C	Comp I
Simon's Rock of Bard C	LA II
Smith C	LA I
Springfield C	Comp II
Stonehill C	Comp I
Suffolk U	Comp I
Swain Sch of Design	Art
Tufts U	Doc I
Wellesley C	LA I
Wentworth Inst of Technology	Engr
Western New England C	Comp I
Weston Sch of Theology	Relig
Wheaton C	LA I
Wheelock C	Teach
Williams C	LA I
Worcester Polytechnic Inst	Comp I

MICHIGAN

Adrian C	LA II
Albion C	LA I
Alma C	LA II
Alpena CC	2-year
Andrews U	Doc II
Aquinas C	Comp I
Baker C	2-year
Bay De Noc CC	2-year
Calvin C	Comp I
Calvin Theological Seminary	Relig
Center for Humanistic Studies	Other
Central Michigan U	Comp I
Charles S Mott CC	2-year
Cleary C	Bus
C of Art and Design Center for Creative Studies	Art
Concordia C*	LA II
Cranbrook Academy of Art	Art
Davenport C	2-year
Delta C	2-year
Detroit C of Business	Bus
Detroit C of Law	Law
Eastern Michigan U	Comp I
Ferris St C	Comp I
Glen Oaks CC	2-year
GMI Engineering & Mgmt Inst	Engr
Gogebic CC	2-year
Grace Bible C	Relig
Grand Rapids Baptist C and Seminary	LA II
Grand Rapids JC	2-year
Grand Valley St C	Comp I
Great Lakes Bible C	Relig
Henry Ford CC	2-year
Highland Park CC	2-year
Hillsdale C*	LA II
Hope C	LA I
Jackson CC	2-year
Jordan C	LA II
Kalamazoo C	LA I
Kalamazoo Valley CC	2-year
Kellogg CC	2-year
Kendall Sch of Design	Art
Kirtland CC	2-year
Lake Michigan C	2-year
Lake Superior St C	Comp I
Lansing CC	2-year
Lawrence Inst of Technology	Comp I
Lewis C of Business	2-year
Macomb CC	2-year
Madonna C	Comp I
Marygrove C*	LA II
Mercy C of Detroit	Comp II
Michigan Christian C	Relig
Michigan St U	Res I
Michigan Technological U	Comp I
Mid Michigan CC	2-year
Monroe County CC	2-year
Montcalm CC	2-year
Muskegon Bus C	2-year
Muskegon CC	2-year
Nazareth C*	LA II
North Central Michigan C	2-year
Northern Michigan U	Comp I
Northwestern Michigan C	2-year
Northwood Inst	Bus

MICHIGAN—Continued

Oakland CC	2-year
Oakland U	Comp I
Olivet C*	LA II
Reformed Bible C	Relig
Sacred Heart Seminary C	LA II
Saginaw Business Inst	2-year
Saginaw Valley St C	Comp I
Saint Clair County CC	2-year
Saint John's Provincial Seminary	Relig
Saint Mary's C*	LA II
Schoolcraft C	2-year
Siena Heights C*	LA II
Southwestern Michigan C	2-year
Spring Arbor C*	LA II
Suomi C	2-year
Thomas M Cooley Law Sch	Law
U of Detroit	Comp I
U of Michigan	
Ann Arbor	Res I
Dearborn	Comp I
Flint	Comp I
Walsh C of Accountancy and Business Administration	Bus
Washtenaw CC	2-year
Wayne County CC	2-year
Wayne St U	Res II
West Shore CC	2-year
Western Michigan U	Doc I
Western Theological Seminary	Relig
William Tyndale C*	LA II

MINNESOTA

Alexandria Voc Tech Inst	2-year
Augsburg C	Comp II
Bethany Lutheran C	2-year
Bethel C	Comp II
Bethel Theological Seminary	Relig
Carleton C	LA I
C of Saint Benedict	Comp II
C of Saint Catherine	Comp II
C of Saint Scholastica*	LA II
C of Saint Teresa*	LA II
C of Saint Thomas	Comp I
Concordia C Moorhead	Comp I
Concordia C Saint Paul*	LA II
Crosier Seminary JC	2-year
Dakota County Area Voc Tech Inst	2-year
Dr Martin Luther C	Teach
Gustavus Adolphus C	Comp II
Hamline U	LA I
Luther Northwestern Theological Seminary	Relig
Macalester C	LA I
Mayo Foundation	
Mayo Graduate Sch of Medicine	Med
Mayo Medical Sch	Med
Medical Inst of Minnesota	2-year
Minnesota Bible C	Relig
Minneapolis C of Art Design	Art
Minnesota CC's System	
Anoka-Ramsey CC	2-year
Arrowhead CC Region	2-year
Austin CC	2-year
Brainerd CC	2-year
Fergus Falls CC	2-year
Hibbing CC	2-year
Inver Hills CC	2-year
Itasca CC	2-year
Lakewood CC	2-year
Mesabi CC	2-year
Minneapolis CC	2-year
Normandale CC	2-year
North Hennepin CC	2-year
Northland CC	2-year
Rainy River CC	2-year
Rochester CC	2-year
Vermilion CC	2-year
Willmar CC	2-year
Worthington CC	2-year
National Education Center	
Brown Inst Campus	2-year
North Central Bible C	Relig
Northwest Tech Inst	2-year

Continued on Following Page

Carnegie Foundation's Classifications of Colleges

MINNESOTA—Continued

Northwestern C*	LA II
Northwestern C of Chiropractic	Hlth
Northwestern Electronics Inst	2-year
Pillsbury Baptist Bible C	Relig
Saint John's U	LA I
Saint Mary's C*	LA II
Saint Mary's JC	2-year
Saint Olaf C	LA I
Saint Paul Bible C*	LA II
Saint Paul Seminary Sch of Divinity	Relig
Saint Paul Tech Voc Inst	2-year
Sch of the Associated Arts	Art
St U System of Minnesota	
Bemidji St U	Comp I
Mankato St U	Comp I
Metropolitan St U	LA II
Moorhead St U	Comp I
Saint Cloud St U	Comp I
Southwest St U	Comp II
Winona St U	Comp I
United Theological Seminary of the Twin Cities	Relig
U of Minnesota	
Duluth	Comp I
Morris	Comp II
Twin Cities	Res I
Tech C at Crookston	2-year
Tech C at Waseca	2-year
William Mitchell C of Law	Law

MISSISSIPPI

Alcorn St U	Comp II
Belhaven C*	LA II
Blue Mountain C*	LA II
Clarke C, Division of Mississippi C	2-year
Coahoma JC	2-year
Copiah-Lincoln JC	2-year
Delta St U	Comp I
East Central JC	2-year
East Mississippi JC	2-year
Hinds JC District	2-year
Holmes JC	2-year
Itawamba JC	2-year
Jackson St U	Comp I
Jones County JC	2-year
Mary Holmes C	2-year
Meridian JC	2-year
Millsaps C	LA II
Mississippi C	Doc II
Mississippi Delta JC	2-year
Mississippi Gulf Coast JC	2-year
Mississippi St U	Res II
Mississippi U for Women	Comp II
Mississippi Valley St U	Comp II
Northeast Mississippi JC	2-year
Northwest Mississippi JC	2-year
Pearl River JC	2-year
Phillips JC	2-year
Phillips JC of Jackson	2-year
Prentiss Normal and Industrial Inst	2-year
Reformed Theological Seminary	Relig
Rust C*	LA II
Southeastern Baptist C	Relig
Southwest Mississippi JC	2-year
Tougaloo C	LA II
U of Mississippi	
Main Campus	Doc I
Medical Center	Med
U of Southern Mississippi	Doc I
Utica JC	2-year
Wesley C	Relig
William Carey C	Comp II
Wood JC	2-year

MISSOURI

Aquinas Inst	Relig
Assemblies of God Theol Seminary	Relig
Avila C	Comp II
Bailey Tech Sch	2-year
Baptist Bible C	Relig
Basic Inst of Technology	2-year
Calvary Bible C	Relig
Cardinal Glennon C	Relig
Central Bible C	Relig
Central Christian C of the Bible	Relig
Central Methodist C*	LA II
Central Missouri St U	Comp I
Clayton U	2-year
Cleveland Chiropractic C	Hlth
Columbia C	Comp I
Conception Seminary C	Relig
Concordia Seminary	Relig
Cottey C	2-year
Covenant Theological Seminary	Relig
Crowder C	2-year
Culver-Stockton C*	LA II
DeVry Inst of Technology	Corp
Drury C	Comp II
East Central JC	2-year
Eden Theological Seminary	Relig
Evangel C	Comp II
Fontbonne C*	LA II
Hannibal-La Grange C	LA II
Harris-Stowe St C	Teach
International Graduate Sch	Other
Jefferson C	2-year
Kansas City Art Inst	Art
Kemper Military Sch and C	2-year
Kenrick Seminary	Relig
Kirksville C of Osteopathic Med	Med
Lincoln U	Comp I
Lindenwood C	Comp II
Logan C of Chiropractic	Hlth
Maryville C	Comp II
Metropolitan CC's System	
Longview CC	2-year
Maple Woods CC	2-year
Penn Valley CC	2-year
Pioneer CC	2-year
Midwestern Baptist Theol Seminary	Relig
Mineral Area C	2-year
Missouri Baptist C*	LA II
Missouri Southern St C	Comp I
Missouri Valley C*	LA II
Missouri Western St C	Comp I
Moberly Area JC	2-year
Nazarene Theological Seminary	Relig
Northeast Missouri St U	Comp I
Northwest Missouri St U	Comp I
Ozark Christian C	Relig
Park C	Comp I
Platt C	2-year
Research C of Nursing	Hlth
Rockhurst C	Comp I
Rutledge C	2-year
St Louis Christian C	Relig
St Louis C of Pharmacy	Hlth
St Louis CC	
Florissant Valley	2-year
Forest Park	2-year
Meramec	2-year
St Louis Conservatory of Music	Art
St Louis Rabbinical C	Relig
Saint Louis U, Main Campus	Doc I
Parks C	Engr
Saint Mary's C of O'Fallon	2-year
Saint Paul Sch of Theology	Relig
Sch of the Ozarks*	LA II
Southeast Missouri St U	Comp I
Southwest Baptist U	Comp II
Southwest Missouri St U	Comp I
State Fair CC	2-year
Stephens C*	LA II
Tarkio C*	LA II
Three Rivers CC	2-year
Trenton JC	2-year
U of Health Sciences	Med
U of Missouri	
Columbia	Res I
Kansas City	Doc II
Rolla	Doc II
St Louis	Doc II
Washington U	Res I
Webster U	Comp I
Wentworth Military Academy & JC	2-year
Westminster C*	LA II
William Jewell C	Comp II
William Woods C*	LA II

MONTANA

Blackfeet CC	2-year
Carroll C	Comp II
C of Great Falls*	LA II
Dawson CC	2-year
Dull Knife Memorial C	2-year
Flathead Valley CC	2-year
Little Big Horn C	2-year
Miles CC	2-year
Montana U System	
Eastern Montana C	Comp I
Montana C Mineral Sci & Tech	Comp II
Montana St U	Doc II
Northern Montana C	Comp II
U of Montana	Doc I
Western Montana C	LA II
Rocky Mountain C*	LA II
Salish Kootenai CC	2-year

NEBRASKA

Bellevue C	Comp I
Bishop Clarkson C of Nursing	Hlth
Central CC	2-year
Chadron St C	Comp II
C of Saint Mary*	LA II
Concordia Teachers C	LA II
Creighton U	Comp I
Dana C*	LA II
Doane C	LA II
Grace C of the Bible	Relig
Hastings C	LA II
Kearney St C	Comp I
Metropolitan Tech CC Area	2-year
Mid-Plains Tech CC Area	
Mc Cook CC	2-year
Mid-Plains CC	2-year
Midland Lutheran C*	LA II
Nebraska Christian C	Relig
Nebraska Indian CC	2-year
Nebraska Wesleyan U*	LA II
Nebraska Western C	2-year
Northeast Tech CC	2-year
Peru St C*	LA II
Platte Valley Bible C	Relig
Southeast CC Area	2-year
Union C*	LA II
U of Nebraska	
Lincoln	Res II
Medical Center	Med
Omaha	Comp I
Wayne St C	Comp II
Western Tech CC Area	2-year
York C	2-year

NEVADA

Old C	LA II
Sierra Nevada C*	LA II
U of Nevada System	
Las Vegas	Comp I
Reno	Doc II
Clark County CC	2-year
Northern Nevada CC	2-year
Truckee Meadows CC	2-year
Western Nevada CC	2-year

NEW HAMPSHIRE

Castle JC	2-year
Colby-Sawyer C*	LA II
Daniel Webster C	Bus
Dartmouth C	Doc II
Franklin Pierce C	Comp II
Franklin Pierce Law Center	Law
Hawthorne C*	LA II
Hesser C	2-year
McIntosh C	2-year
Merrimack Valley C	2-year
New England C*	LA II
New Hampshire C	Bus
NH Tech Inst	2-year
NH Voc-Tech C at Berlin	2-year
NH Voc-Tech C at Claremont	2-year
NH Voc-Tech C at Laconia	2-year
NH Voc-Tech C at Manchester	2-year
NH Voc-Tech C at Nashua	2-year
NH Voc-Tech C at Stratham	2-year
Notre Dame C*	LA II
Rivier C	Comp II
Saint Anselm C	LA II
U of New Hampshire System	
U of New Hampshire	Doc II
Keene St C	Comp I
Plymouth St C	Comp I
Sch for Lifelong Learning	Other
White Pines C	2-year

NEW JERSEY

Assumption C for Sisters	2-year
Atlantic CC	2-year
Bergen CC	2-year
Berkeley Sch	2-year
Beth Medrash Govoha	Relig
Bloomfield C	Comp II
Brookdale CC	2-year
Burlington County C	2-year
Caldwell C	LA II
Camden County C	2-year
Centenary C*	LA II
C of Saint Elizabeth*	LA II
County C of Morris	2-year
Cumberland County C	2-year
Don Bosco C	Relig
Drew U**	LA I
Essex County C	2-year
Fairleigh Dickinson U	
Edward Williams C	2-year
Florham Park-Madison	Comp I
Rutherford	Comp I
Teaneck-Hackensack	Comp I
Felician C*	LA II
Georgian Court C	Comp II
Glassboro St C	Comp I
Gloucester County C	2-year
Hudson County CC	2-year
Immaculate Conception Seminary of Seton Hall U	Relig
Jersey City St C	Comp I
Kean C of New Jersey	Comp I
Mercer County CC	2-year
Middlesex County C	2-year
Monmouth C	Comp I
Montclair St C	Comp I
New Brunswick Theol Seminary	Relig
New Jersey Inst of Technology	Engr
Northeastern Bible C	Relig
Ocean County C	2-year
Passaic County CC	2-year
Princeton Theological Seminary	Relig
Princeton U	Res I
Rabbinical C of America	Relig
Ramapo C of New Jersey	Comp I
Rider C	Comp I
Rutgers, the St U of New Jersey	
Camden	Comp I
Newark	Doc II
New Brunswick	Res I
Saint Peter's C	Comp I
Salem CC	2-year
Seton Hall U	Comp I
Somerset County C	2-year
Stevens Inst of Technology	Doc II
Stockton St C	Comp I
Talmudical Academy of New Jersey	Relig
Thomas A Edison St C	Comp I
Trenton St C	Comp I
Union County C	2-year
U of Medicine and Dentistry of NJ	Med
Upsala C	Comp II
Westminster Choir C	Art
William Paterson C	Comp I

NEW MEXICO

C of Santa Fe*	LA II
C of the Southwest*	LA II
Eastern New Mexico U	
Main Campus	Comp I
Roswell	2-year
Inst of American Indian Arts	2-year
New Mexico Highlands U	Comp II
NM Inst of Mining and Technology	Engr
New Mexico JC	2-year
New Mexico Military Inst	2-year
New Mexico St U	
Main Campus	Res I
Alamogordo Branch	2-year
Carlsbad Branch	2-year
Grants Branch	2-year
Northern New Mexico CC	2-year
Saint John's C at Santa Fe	LA I
San Juan C	2-year
Santa Fe CC	2-year
U of New Mexico	
Main Campus	Res I
Gallup Branch	2-year
Western New Mexico U	Comp II

NEW YORK

Academy of Aeronautics	2-year
Adelphi U	Doc II
Albany Business C	2-year
Albany C of Pharmacy of Union U	Hlth
Albany Law Sch of Union U	Law
Albany Medical C of Union U	Med
Alfred U	Comp II
American Academy Mc Allister Inst of Funeral Service	2-year
American Academy of Dramatic Arts	2-year
Associated Beth Rivkah Schs	Relig
Bank Street C of Education	Teach
Bard C	LA I
Belzer Yeshiva-Machzikei Torah Seminary	Relig
Berkeley Sch of Nassau, Inc	2-year
Berkeley Sch of New York, Inc	2-year
Berkeley Sch of Westchester, Inc	2-year
Beth Hamedrash Shaarei Yosher Inst	Relig
Beth Hatalmud Rabbinical C	Relig
Beth Hillel Rabbinical Seminary	Relig
Beth Israel Sch of Nursing	2-year
Beth Jacob Hebrew Teachers C	Relig
Beth Medrash Eeyun Hatalmud	Relig
Beth Medrash Emek Halacha Rabbinical C	Relig
Bnos Jerusalem Seminary	Relig
Boricua C*	LA II
Bramson O R T Tech Inst	2-year
Briarcliffe C for Business	2-year
Brooklyn Law Sch	Law
Bryant & Stratton Business Inst of Buffalo	2-year
Bryant & Stratton Business Inst of Rochester	2-year
Bryant & Stratton Business Inst of Syracuse	2-year
Canisius C	Comp I
Cathedral C of the Immaculate Conception	LA II
Cazenovia C	2-year
Central City Business Inst	2-year
Central Yeshiva Tomchei Tmimim Lubavitz of the USA	Relig
Christ the King Seminary	Relig
City U of New York	
Bernard M Baruch C	Comp I
Borough of Manhattan CC	2-year
Bronx CC	2-year
Brooklyn C	Comp I
City C	Comp I
C of Staten Island	Comp I
Graduate Sch and U Center	Doc I
Herbert H Lehman C	Comp I
Hostos CC	2-year
Hunter C	Comp I
John Jay C of Criminal Justice	Other
Kingsborough CC	2-year
La Guardia CC	2-year
Medgar Evers C	Comp I
New York City Tech C	2-year
Queens C	Comp I
Queensborough CC	2-year
York C	Comp I
Clarkson U	Doc II
Cochran Sch of Nursing	2-year
Colgate Rochester Divinity Sch Bexley Hall-Crozer Theol Sem	Relig
Colgate U	LA I
C for Human Services	Other
C of Insurance	Corp
C of Mount Saint Vincent	LA I
C of New Rochelle	Comp I
C of Saint Rose	Comp I
Columbia U	Res I
Barnard C	LA I
Teachers C	Doc I
Concordia C*	LA II
Cooper Union	Engr
Cornell U	Res I
Medical Center	Med
Culinary Inst of America	2-year
D'Youville C*	LA II
Daemen C	Comp II
Darkei No'am Rabbinical C	Relig
Derech Ayson Rabbinical Seminary	Relig
Dominican C of Blauvelt	Comp II
Dowling C	Comp II
Elizabeth Seton C	2-year
Elmira C	Comp II
Five Towns C	2-year
Fordham U	Doc I
Friends World C	LA II
General Theological Seminary	Relig
Gruss Girls Seminary	Relig
Hamilton C	LA I
Hartwick C	LA I
Hebrew Union C-Jewish Inst of Religion (NY Branch)	Relig
Hilbert C	2-year
Hobart and William Smith Cs	LA I
Hofstra U	Doc II
Holy Trinity Orthodox Seminary	Relig
Houghton C	LA I
Inst for Advanced Studies in the Humanities	Relig
Inst of Design and Construction	2-year
Inst of Management Competency	Corp
Interboro Inst	2-year
Iona C	Comp I
Ithaca C	Comp I
Jamestown Business C	2-year
Jewish Theol Seminary of America	Relig
Juilliard Sch	Art
Katharine Gibbs Sch at Melville	2-year
Katharine Gibbs Sch at New York	2-year
Kehilath Yakov Rabbinical Seminary	Relig
Keuka C*	LA II
King's C	LA II
Kol Yaakov Torah Center	Relig
Laboratory Inst of Merchandising	2-year
Le Moyne C	Comp II
Long Island C Hospital Sch of Nursing	2-year
Long Island Seminary of Jewish Studies	Relig
Long Island U	
Brooklyn Campus	Comp I
C W Post Campus	Comp I
Southampton Campus	LA II
Machzikei Hadath Rabbinical C	Relig
Manhattan C	Comp I
Manhattan Sch of Music	Art
Manhattanville C	LA I
Mannes C of Music	Art
Maria C of Albany	2-year
Maria Regina C	2-year
Marist C	Comp I
Maryknoll Sch of Theology	Relig
Marymount C*	LA II
Marymount Manhattan C	LA I
Mater Dei C	2-year
Medaille C	Relig
Mercy C	Comp I
Mesivta Eastern Parkway Rabbinical Seminary	Relig
Mesivta Torah Vodaath Seminary	Relig
Mesivtha Tifereth Jerusalem of America	Relig
Mirrer Yeshiva Central Inst	Relig
Molloy C	Comp II
Monroe Business Inst	2-year
Mount Saint Mary C*	LA II
Mount Sinai Sch of Medicine of City U of New York	Med
Nazareth C of Rochester	Comp II
New Sch for Social Research	Doc II
New York Chiropractic C	Hlth
New York C of Podiatric Medicine	Hlth
New York Inst of Technology	
Main Campus	Comp I
New York	Comp I
New York Law Sch	Law
New York Medical C	Med
New York Sch of Interior Design	Art
New York Theological Seminary	Relig
New York U	Res I
Niagara U	Comp I
Nyack C	LA II
Ohr Hameir Theological Seminary	Relig
Ohr Somayach Insts	Relig
Olean Business Inst	2-year
Pace U	
New York	Comp I
Pleasantville-Briarcliff	Comp I
White Plains	Comp I
Parsons Sch of Design	Art
Paul Smith's C of Arts and Sciences	2-year
Plaza Business Inst	2-year
Polytechnic U	Doc II
Pratt Inst	Comp I
Rabbi Isaac Elchanan Theological Seminary	Relig
Rabbinical Academy Mesivta Rabbi Chaim Berlin	Relig
Rabbinical C Beth Shraga	Relig
Rabbinical C Bobover Yeshiva B'nei Zion	Relig
Rabbinical C Ch'san Sofer of NY	Relig
Rabbinical C of Kamenitz Yeshiva	Relig
Rabbinical C of Long Island	Relig
Rabbinical Seminary Adas Yereim	Relig
Rabbinical Seminary M'kor Chaim	Relig
Rabbinical Seminary of America	Relig
Rabbinical Seminary of Munkacs	Relig
Rensselaer Polytechnic Inst	Res II
Rika Breuer Teachers Seminary	Relig
Roberts Wesleyan C*	LA II
Rochester Business Inst	2-year
Rochester Inst of Technology	Comp I
Rockefeller U†	Res I
Russell Sage C	
Main Campus	Comp I
JC of Albany	2-year
St Anthony on Hudson Seminary	Relig
Saint Bernard's Inst	Relig
Saint Bonaventure U	Comp I
St Francis C	Comp I
St John Fisher C	Comp II
Saint John's U	Doc I
Saint Joseph's C	
Main Campus*	LA II
Branch Campus	LA II
Saint Joseph's Seminary	Relig
St Lawrence U	LA I
Saint Thomas Aquinas C	Comp II
Saint Vladimir's Orthodox Theological Seminary	Relig
Sara Schenirer Teachers Seminary	Relig
Sarah Lawrence C	LA I
Sch of Visual Arts	Art
Seminary of the Immaculate Conception	Relig
Sh'or Yoshuv Rabbinical C	Relig
Shaarei Zion Academy	Relig
Siena C	Comp I
Skidmore C	LA I
St U of New York	
Albany	Res II
Binghamton	Doc I
Buffalo	Res II
Stony Brook	Res I
Empire State C	Comp I
C at Brockport	Comp I
C at Buffalo	Comp I
C at Cortland	Comp I
C at Fredonia	Comp I
C at Geneseo	Comp I
C at New Paltz	Comp I
C at Old Westbury	Comp I
C at Oneonta	Comp I
C at Oswego	Comp I
C at Plattsburgh	Comp I
C at Potsdam	Comp I
C at Purchase	LA I
C of Optometry	Hlth
Health Science Center	
Brooklyn	Med
Buffalo	Med
Stony Brook	Med
Syracuse	Med
A&T C at Alfred	2-year
A&T C at Canton	2-year

** This institution also meets the criteria for Doc II, but is classified LA I because of its liberal-arts tradition.

† Because of its unique status, Rockefeller U is classified Res I even though it does not meet the criteria for this category.

Continued on Page 28, Column 1

Key to Abbreviations

Res I	Research universities I
Res II	Research universities II
Doc I	Doctorate-granting universities I
Doc II	Doctorate-granting universities II
Comp I	Comprehensive universities and colleges I
Comp II	Comprehensive universities and colleges II
LA I	Liberal-arts colleges I
LA II	Liberal-arts colleges II
2-year	Two-year colleges and institutes
Relig	Theological seminaries, Bible colleges, and other institutions offering degrees in religion
Med	Medical schools and medical centers
Hlth	Other separate health-professions schools
Law	Schools of law
Engr	Schools of engineering and technology
Bus	Schools of business and management
Art	Schools of art, music, and design
Teach	Teachers colleges
Other	Other specialized institutions
Corp	Corporate colleges and universities
*	These LA II institutions award fewer than one-half of their degrees in liberal-arts fields but are too small to be classified as comprehensive institutions.

Carnegie Foundation's Classifications of Colleges

NEW YORK—Continued

St U of New York	
A&T C at Cobleskill	2-year
A&T C at Delhi	2-year
A&T C at Farmingdale	2-year
A&T C at Morrisville	2-year
C of Environmental Sci & Forestry	Doc II
Maritime C	Other
C of Technology at Utica-Rome	Comp I
Fashion Inst of Technology	Art
NY St C of Ceramics at Alfred U	Engr
Adirondack CC	2-year
Broome CC	2-year
Cayuga County CC	2-year
Clinton CC	2-year
Columbia-Greene CC	2-year
CC of the Finger Lakes	2-year
Corning CC	2-year
Dutchess CC	2-year
Erie CC	
City Campus	2-year
North Campus	2-year
South Campus	2-year
Fulton-Montgomery CC	2-year
Genesee CC	2-year
Herkimer County CC	2-year
Hudson Valley CC	2-year
Jamestown CC	2-year
Jefferson CC	2-year
Mohawk Valley CC	2-year
Monroe CC	2-year
Nassau CC	2-year
Niagara County CC	2-year
North Country CC	2-year
Onondaga CC	2-year
Orange County CC	2-year
Rockland CC	2-year
Schenectady County CC	2-year
Suffolk County CC	
Ammerman Campus	2-year
Eastern Campus	2-year
Western Campus	2-year
Sullivan County CC	2-year
Tompkins-Cortland CC	2-year
Ulster County CC	2-year
Westchester CC	2-year
Syracuse U	
Main Campus	Res II
Utica C	Comp II
Talmudical Inst of Upstate NY	Relig
Talmudical Seminary Oholei Torah	Relig
Taylor Business Inst	2-year
Tech Career Inst	2-year
Tobe-Coburn Sch of Fashion Careers	2-year
Touro C	Comp I
Trocaire C	2-year
Union C	LA I
Union Theological Seminary	Relig
United Talmudical Academy of Monsey	Relig
U of Rochester	Res I
U of St of New York	
Regents C Degrees	Comp I
Utica Sch of Commerce	2-year
Vassar C	LA I
Villa Maria C of Buffalo	2-year
Wadhams Hall Seminary and C	Relig
Wagner C	Comp II
Webb Inst of Naval Architecture	Engr
Wells C	LA I
Wendell Castle Sch	2-year
Westchester Business Inst	2-year
Wood Sch	2-year
Yeshiva Bnei Torah	Relig
Yeshiva Derech Chaim	Relig
Yeshiva Karlin Stolin Beth Aaron Y'Israel Rabbinical Inst	Relig
Yeshiva of Nitra Rabbinical C	Relig
Yeshiva Shaar Hatorah	Relig
Yeshiva U	Res I
Yeshivah Ohel Shmuel	Relig
Yeshivath Mikdash Melech	Relig
Yeshivath Viznitz	Relig
Yeshivath Zichron Moshe	Relig

NORTH CAROLINA

Anson Tech C	2-year
Asheville Buncombe Tech C	2-year
Atlantic Christian C*	LA II
Barber-Scotia C*	LA II
Beaufort County CC	2-year
Belmont Abbey C*	LA II
Bennett C*	LA II
Bladen Tech Inst	2-year
Blanton's JC	2-year
Blue Ridge Tech C	2-year
Brevard C	2-year
Brookstone C of Business	2-year
Brunswick Tech C	2-year
Caldwell CC and Tech Inst	2-year
Campbell U	Comp I
Cape Fear Tech Inst	2-year
Carteret Tech C	2-year
Catawba C*	LA II

NORTH CAROLINA—Continued

Catawba Valley Tech C	2-year
Cecils JC	2-year
Central Carolina Tech C	2-year
Central Piedmont CC	2-year
Chowan C	2-year
Cleveland Tech C	2-year
Coastal Carolina CC	2-year
C of the Albemarle	2-year
Craven CC	2-year
Davidson C	LA I
Davidson County CC	2-year
Duke U	Res I
Durham Tech Inst	2-year
East Coast Bible C	Relig
Edgecombe Tech C	2-year
Elon C	Comp I
Fayetteville Tech Inst	2-year
Forsyth Tech Inst	2-year
Gardner-Webb C	Comp II
Gaston C	2-year
Greensboro C*	LA II
Guilford C	Comp II
Guilford Tech CC	2-year
Halifax CC	2-year
Hardbarger JC of Business	2-year
Haywood Tech C	2-year
High Point C	LA II
Isothermal CC	2-year
James Sprunt Tech C	2-year
John Wesley C	Relig
Johnson C Smith U*	LA II
Johnston Tech C	2-year
King's C	2-year
Lees-McRae C	2-year
Lenoir CC	2-year
Lenoir-Rhyne C*	LA II
Livingstone C*	LA II
Louisburg C	2-year
Mars Hill C*	LA II
Martin CC	2-year
Mayland Tech C	2-year
McDowell Tech Inst	2-year
Meredith C	Comp II
Methodist C*	LA II
Mitchell CC	2-year
Montgomery Tech C	2-year
Montreat-Anderson C	2-year
Mount Olive C	2-year
Nash Tech C	2-year
North Carolina Wesleyan C*	LA II
Pamlico Tech C	2-year
Peace C	2-year
Pfeiffer C*	LA II
Piedmont Aerospace Inst	2-year
Piedmont Bible C	Relig
Piedmont Tech C	2-year
Pitt CC	2-year
Queens C	LA II
Randolph Tech C	2-year
Richmond Tech C	2-year
Roanoke Bible C	Relig
Roanoke-Chowan Tech C	2-year
Robeson Tech C	2-year
Rockingham CC	2-year
Rowan Tech C	2-year
Rutledge C at Charlotte	2-year
Rutledge C at Durham	2-year
Rutledge C at Fayetteville	2-year
Rutledge C at Greensboro	2-year
Rutledge C at Winston-Salem	2-year
Sacred Heart C*	LA II
Saint Andrew's Presbyterian C*	LA II
Saint Augustine's C	Comp II
Saint Mary's C	2-year
Salem C	LA I
Sampson Tech C	2-year
Sandhills CC	2-year
Shaw U	Comp II
Southeastern Baptist Theological Seminary	Relig
Southeastern CC	2-year
Southwestern Tech C	2-year
Stanly Tech C	2-year
Surry CC	2-year
Tech C of Alamance	2-year
Tri-County CC	2-year
U of North Carolina	
Appalachian St U	Comp I
East Carolina U	Comp I
Elizabeth City St U	Comp II
Fayetteville St U	Comp I
North Carolina A&T St U	Comp I
North Carolina Central U	Comp I
North Carolina Sch of the Arts	Art
North Carolina St U	Res I
Pembroke St U	Comp II
U of North Carolina	
Asheville	Comp I
Chapel Hill	Res I
Charlotte	Comp I
Greensboro	Doc II
Wilmington	Comp I
Western Carolina U	Comp I

Key to Abbreviations

Res I	Research universities I
Res II	Research universities II
Doc I	Doctorate-granting universities I
Doc II	Doctorate-granting universities II
Comp I	Comprehensive universities and colleges I
Comp II	Comprehensive universities and colleges II
LA I	Liberal-arts colleges I
LA II	Liberal-arts colleges II
2-year	Two-year colleges and institutes
Relig	Theological seminaries, Bible colleges, and other institutions offering degrees in religion
Med	Medical schools and medical centers
Hlth	Other separate health-professions schools
Law	Schools of law
Engr	Schools of engineering and technology
Bus	Schools of business and management
Art	Schools of art, music, and design
Teach	Teachers colleges
Other	Other specialized institutions
Corp	Corporate colleges and universities
*	These LA II institutions award fewer than one-half of their degrees in liberal-arts fields but are too small to be classified as comprehensive institutions.

NORTH CAROLINA—Continued

U of North Carolina	
Winston-Salem St U	Comp II
Vance-Granville CC	2-year
Wake Forest U	Comp I
Wake Tech C	2-year
Warren Wilson C	LA II
Wayne CC	2-year
Western Piedmont CC	2-year
Wilkes CC	2-year
Wilson County Tech Inst	2-year
Wingate C	Comp II

NORTH DAKOTA

Fort Berthold CC	2-year
Jamestown C*	LA II
Little Hoop CC	2-year
ND St Board of Higher Education	
U of North Dakota	
Main Campus	Doc II
Williston Center	2-year
North Dakota St U	
Main Campus	Doc II
Bottineau	2-year
Dickinson St C*	LA II
Mayville St C*	LA II
Minot St C	Comp I
North Dakota St Sch of Science	2-year
Valley City St C*	LA II
Bismarck JC	2-year
Lake Region CC	2-year
Northwest Bible C	Relig
Standing Rock C	2-year
Trinity Bible C	Relig
Turtle Mountain CC	2-year
U of Mary*	LA II

OHIO

A T E S Tech Inst	2-year
Antioch U	LA I
Antonelli Inst of Art & Photography	2-year
Art Academy of Cincinnati	Art
Ashland C	Comp I
Athenaeum of Ohio	Relig
Baldwin-Wallace C	Comp I
Belmont Tech C	2-year
Bluffton C*	LA II
Borromeo C of Ohio	LA II
Bowling Green St U	
Main Campus	Doc I
Firelands C	2-year
Bryant & Stratton Business Inst	2-year
Capital U	Comp I
Case Western Reserve U	Res I
Cedarville C	Comp II
Central Ohio Tech C	2-year
Central St U	Comp II
Chatfield C	2-year
Cincinnati Bible C	Relig
Cincinnati C of Mortuary Science	2-year
Cincinnati Tech C	2-year
Circleville Bible C	Relig
Clark Tech C	2-year
Cleveland C of Jewish Studies	Relig
Cleveland Inst of Art	Art
Cleveland Inst of Electronics	2-year
Cleveland Inst of Music	Art
Cleveland St U	Doc II
C Mount St Joseph-on-the-Ohio	Comp II
C of Wooster	LA I
Columbus C of Art and Design	Art
Columbus Tech Inst	2-year
Cuyahoga CC District	2-year
Davis JC	2-year
Defiance C*	LA II
Denison U	LA I
DeVry Inst of Technology	Corp
Dyke C	Bus
Edison St CC	2-year
Electronic Technology Inst	2-year
Findlay C*	LA II
Franciscan U of Steubenville*	LA II
Franklin U	Bus
God's Bible Sch and C	Relig
Hebrew Union C	
Jewish Inst of Religion	Relig
Heidelberg C*	LA II
Hiram C	LA II
Hocking Tech C	2-year
International Broadcasting Sch	2-year
ITT Tech Inst	2-year
Jefferson Tech C	2-year
John Carroll U	Comp I
Kent State U	
Main Campus	Doc I
Ashtabula Regional Campus	2-year
East Liverpool Regional Campus	2-year
Salem Regional Campus	2-year
Stark County Regional Campus	2-year
Trumbull Regional Campus	2-year
Tuscarawas Regional Campus	2-year
Kenyon C	LA I
Kettering C of Medical Arts	2-year
Lake Erie C*	LA II
Lakeland CC	2-year
Lima Tech C	2-year
Lorain County CC	2-year
Lourdes C	LA II
Malone C*	LA II
Marietta C*	LA II
Marion Tech C	2-year
Medical C of Ohio at Toledo	Med
Methodist Theological Sch of Ohio	Relig
Miami U	
Oxford Campus	Doc I
Hamilton Campus	2-year
Middletown Campus	2-year
Miami-Jacobs JC of Business	2-year
Mount Union C*	LA II
Mount Vernon Nazarene C	LA II
Muskingum Area Tech C	2-year
Muskingum C*	LA II
North Central Tech C	2-year
Northeastern Ohio U's C of Med	Med
Northwest Tech C	2-year
Northwestern Business C-Tech Ctr	2-year
Notre Dame C*	LA II
Oberlin C	LA I
Ohio C of Business & Technology	2-year
Ohio C of Podiatric Medicine	Hlth
Ohio Dominican C*	LA II
Ohio Northern U	Comp I
Ohio State U	
Main Campus	Res I
Agricultural Tech Inst	2-year

OHIO—Continued

Ohio State U	
Lima	2-year
Mansfield	2-year
Marion	2-year
Newark	2-year
Ohio U	
Main Campus	Doc I
Belmont	2-year
Chillicothe Campus	2-year
Lancaster Branch	2-year
Zanesville Branch	2-year
Ohio Wesleyan U	LA II
Otterbein C	Comp II
Owens Tech C	2-year
Pontifical C Josephinum	LA II
Rabbinical C of Telshe	Relig
RETS Tech Center	2-year
Rio Grande C	Comp II
Saint Mary Seminary	Relig
Shawnee St U	2-year
Sinclair CC	2-year
Southern Ohio C	2-year
Southern St CC	2-year
Stark Tech C	2-year
Terra Tech C	2-year
Tiffin U	Bus
Trinity Lutheran Seminary	Relig
Union for Experimenting C's & U's Undergraduate Studies Program and Union Graduate Sch	Doc I
United Theological Seminary	Relig
U of Akron	
Main Campus	Doc I
Wayne General and Tech C	2-year
U of Cincinnati	
Main Campus	Res I
Clermont General and Tech C	2-year
Raymond Walters General & Tech C	2-year
U of Dayton	Comp I
U of Toledo	Doc I
Urbana U*	LA II
Ursuline C*	LA II
Virginia Marti Fashion Inst	2-year
Walsh C*	LA II
Washington Tech C	2-year
West Side Inst of Technology	2-year
Wilberforce U*	LA II
Wilmington C*	LA II
Wittenberg U	LA II
Wright St U	
Main Campus	Comp I
Lake Campus	2-year
Xavier U	Comp I
Youngstown C of Business and Professional Drafting	2-year
Youngstown St U	Comp I

OKLAHOMA

Bacone C	2-year
Bartlesville Wesleyan C*	LA II
Cameron U	Comp I
Carl Albert JC	2-year
Central St U	Comp I
Connors St C	2-year
East Central U	Comp I
Eastern Oklahoma St C	2-year
El Reno JC	2-year
Flaming Rainbow U	LA II
Hillsdale Free Will Baptist C	Relig
Langston U	Comp II
Murray St C	2-year
National Education Center	
Spartan Sch Aeronautics Campus	2-year
Northeastern Oklahoma A&M C	2-year
Northeastern St U	Comp I
Northern Oklahoma C	2-year
Northwestern Oklahoma St U	Comp II
Oklahoma Baptist U*	LA II
Oklahoma Christian C	Comp II
Oklahoma City CC	2-year
Oklahoma City U	Comp I
Oklahoma C of Business and Tech	2-year
Oklahoma C of Osteopathic Medicine and Surgery	Med
Oklahoma Panhandle St U*	LA II
Oklahoma St U	
Main Campus	Res II
Tech Branch Oklahoma City	2-year
Oral Roberts U	Comp I
Phillips U*	LA II
Rogers St C	2-year
Rose St C	2-year
Saint Gregory's C	2-year
Sayre JC	2-year
Seminole JC	2-year
Southeastern Oklahoma St U	Comp I
Southern Nazarene U	LA II
Southwestern C of Christian Ministries	Relig
Southwestern Oklahoma St U	Comp I
Tulsa JC	2-year
U of Oklahoma	
Health Sciences Center	Med
Norman Campus	Res II
U of Science and Arts of Oklahoma*	LA II
U of Tulsa	Doc II
Western Oklahoma St C	2-year

OREGON

Bassist C	2-year
Blue Mountain CC	2-year
Central Oregon CC	2-year
Chemeketa CC	2-year
Clackamas CC	2-year
Clatsop CC	2-year
Columbia Christian C*	LA II
Concordia C*	LA II
Eugene Bible C	Relig
George Fox C*	LA II
ITT Tech Inst	2-year
Lane CC	2-year
Lewis and Clark C	LA I
Linfield C	Comp II
Linn-Benton CC	2-year
Marylhurst C for Lifelong Learning	LA II
Mount Angel Seminary	Relig
Mount Hood CC	2-year
Multnomah Sch of the Bible	Relig
Northwest Christian C	Relig
Oregon Graduate Center	Other
Ore Grad Sch of Professional Psych	Other
Oregon Polytechnic Inst	2-year
Ore St System of Higher Education	
Eastern Oregon St C	Comp II
Oregon Health Sciences U	Med
Oregon Inst of Technology	Engr
Oregon St U	Res I
Portland St U	Doc II

OREGON—Continued

Ore St System of Higher Education	
Southern Oregon St C	Comp I
U of Oregon Main Campus	Res II
Western Oregon St C	Comp I
Pacific Northwest C of Art	Art
Pacific U*	LA II
Portland CC	2-year
Reed C	LA I
Rogue CC	2-year
Southwestern Oregon CC	2-year
Treasure Valley CC	2-year
Umpqua CC	2-year
U of Portland	Comp I
Warner Pacific C	LA II
Western Baptist C*	LA II
Western Conservative Baptist Sem	Relig
Western Evangelical Seminary	Relig
Western Sts Chiropractic C	Hlth
Willamette U	LA I

PENNSYLVANIA

Academy of the New Church	Relig
Albright C	LA I
Allegheny C	LA I
Allentown C of Saint Francis De Sales*	LA II
Alvernia C*	LA II
American C	Corp
American Inst of Design	2-year
Antonelli Inst of Art & Photography	2-year
Art Inst of Philadelphia	2-year
Art Inst of Pittsburgh	2-year
Baptist Bible C of Pennsylvania	Relig
Beaver C	Comp II
Berean Inst	2-year
Bryn Mawr C**	LA I
Bucknell U	LA I
Bucks County CC	2-year
Butler County CC	2-year
Cabrini C*	LA II
Carlow C	LA II
Carnegie Mellon U	Res I
Cedar Crest C*	LA II
Central Pennsylvania Business Sch	2-year
Chatham C	LA I
Chestnut Hill C	LA I
C Misericordia*	LA II
Combs C of Music	Art
CC of Allegheny County	
Allegheny Campus	2-year
Boyce Campus	2-year
C Center-North	2-year
South Campus	2-year
CC of Beaver County	2-year
CC of Philadelphia	2-year
Curtis Inst of Music	Art
Dean Inst of Technology	2-year
Delaware County CC	2-year
Delaware Valley C of Sci and Ag	Comp II
Dickinson C	LA I
Dickinson Sch of Law	Law
Drexel U	Doc II
Dropsie C	Relig
Duquesne U	Doc II
Eastern Baptist Theol Seminary	Relig
Eastern C*	LA II
Electronic Inst at Harrisburg	2-year
Electronic Inst at Pittsburgh	2-year
Elizabethtown C	Comp II
Erie Business Center	2-year
Evangelical Sch of Theology	Relig
Franklin and Marshall C	LA I
Gannon U	Comp I
Geneva C*	LA II
Gettysburg C	LA I
Gratz C	LA II
Grove City C	Comp II
Gwynedd-Mercy C	Comp II
Hahnemann U	Doc II
Harcum JC	2-year
Harrisburg Area CC	2-year
Haverford C	LA I
Holy Family C*	LA II
Hussian Sch of Art	2-year
ICS Center for Degree Studies	2-year
Immaculata C	LA II
Juniata C	LA I
Keystone JC	2-year
King's C	Comp II
La Roche C	Comp II
La Salle U	Comp I
Lackawanna JC	2-year
Lafayette C	LA I
Lancaster Bible C	Relig
Lancaster Theological Seminary	Relig
Lebanon Valley C	LA I
Lehigh County CC	2-year
Lehigh U	Doc I
Lincoln Tech Inst	2-year
Lincoln U*	LA II
Lutheran Theological Seminary at Gettysburg	Relig
Lutheran Theological Seminary at Philadelphia	Relig
Luzerne County CC	2-year
Lycoming C*	LA II
Lyons Tech Inst	2-year
Manor JC	2-year
Mary Immaculate Seminary	Relig
Marywood C	Comp I
Mc Carrie Schs of Health Science and Technology	2-year
Medical C of Pennsylvania	Med
Mercyhurst C	Comp II
Messiah C	Comp II
Montgomery County CC	2-year
Moore C of Art	Art
Moravian C	Comp II
Mount Aloysius JC	2-year
Muhlenberg C	LA I
National Education Center	
Vale Tech Inst Campus	2-year
Neumann C	LA I
New Sch of Music	Art
Northampton County Area CC	2-year
Northeastern Christian JC	2-year
O S Johnson Sch of Technology	2-year
Peirce JC	2-year
Penn Tech Inst	2-year
Pennco Tech	2-year
Pennsylvania C of Optometry	Hlth
Pa C of Podiatric Medicine	Hlth
Pa C of Straight Chiropractic	Hlth
Pennsylvania Inst of Technology	2-year
Pennsylvania St U	
Main Campus	Res I

** This institution also meets the criteria for Doc II, but is classified LA I because of its liberal-arts tradition.

PENNSYLVANIA—Continued

Pennsylvania St U	
Allentown Campus	2-year
Altoona Campus	2-year
Beaver Campus	2-year
Behrend C	Comp II
Berks Campus	2-year
Capitol C	Comp I
Delaware Campus	2-year
Du Bois Campus	2-year
Fayette Campus	2-year
Hazleton Campus	2-year
Hershey Medical Center	Med
King of Prussia Graduate Center	Other
McKeesport Campus	2-year
Mont Alto Campus	2-year
New Kensington Campus	2-year
Ogontz Campus	2-year
Schuylkill Campus	2-year
Shenango Valley Campus	2-year
Wilkes-Barre Campus	2-year
Worthington Scranton Campus	2-year
York Campus	2-year
Philadelphia C of Art	Art
Phila C of Osteopathic Medicine	Med
Phila C of Pharmacy and Science	Hlth
Phila C of Textiles and Science	Comp I
Philadelphia C of the Bible	Relig
Phila C of the Performing Arts	Art
Phila Sch of Print & Advertising	2-year
Pinebrook JC	2-year
Pittsburgh Inst of Aeronautics	2-year
Pittsburgh Tech Inst	2-year
Pittsburgh Theological Seminary	Relig
Point Park C	Comp I
Reading Area CC	2-year
Robert Morris C	Bus
Rosemont C	LA II
Saint Charles Borromeo Seminary	Relig
Saint Francis C	Comp II
Saint Joseph's U	Comp I
Saint Vincent C & Seminary	LA II
Seton Hill C*	LA II
Spring Garden C*	LA II
St System of Higher Education	
Bloomsburg U of Pennsylvania	Comp I
California U of Pennsylvania	Comp I
Cheyney U of Pennsylvania	Comp II
Clarion U of Pennsylvania	Comp I
Clarion U of Pa, Venango Campus	Hlth
East Stroudsburg U of Pa	Comp I
Edinboro U of Pennsylvania	Comp I
Indiana U of Pennsylvania	Comp I
Kutztown U of Pennsylvania	Comp I
Lock Haven U of Pennsylvania	Comp I
Mansfield U of Pennsylvania	Comp I
Millersville U of Pennsylvania	Comp I
Shippensburg U of Pennsylvania	Comp I
Slippery Rock U of Pennsylvania	Comp I
West Chester U of Pennsylvania	Comp I
Susquehanna U	Comp II
Swarthmore C	LA I
Talmudical Yeshiva of Philadelphia	Relig
Temple U	Res II
Thaddeus Stevens St Sch of Tech	2-year
Thiel C	LA II
Thomas Jefferson U	Hlth
Tracey-Warner Sch	2-year
Triangle Tech, Inc	2-year
Triangle Tech, Inc at Erie	2-year
Triangle Tech, Inc at Greensburg	2-year
Trinity Episcopal Sch for the Ministry	Relig
United Wesleyan C	Relig
U of Pennsylvania	Res I
U of Pittsburgh	
Main Campus	Res I
Bradford	LA II
Greensburg	2-year
Johnstown	Comp I
Titusville	2-year
U of Scranton	Comp I
Ursinus C	LA I
Valley Forge Christian C	Relig
Valley Forge Military JC	2-year
Villa Maria C*	LA II
Villanova U	Comp I
Washington and Jefferson C	LA I
Waynesburg C*	LA II
Westminster C*	LA II
Westminster Theological Seminary	Relig
Westmoreland County CC	2-year
Widener U	Comp I
Brandywine C	2-year
Delaware Law Sch	Law
Wilkes C	Comp I
Williamson Free Sch	2-year
Williamsport Area CC	2-year
Wilson C	LA II
Yeshivath Beth Moshe	Relig
York C of Pennsylvania	Comp I

RHODE ISLAND

Brown U	Res II
Bryant C	Bus
CC of Rhode Island	2-year
Johnson and Wales C	Bus
New England Inst of Tech	Engr
Providence C	Comp I
Rhode Island C	Comp I
Rhode Island Sch of Design	Art
Roger Williams C	Comp II
Division of Continuing Education	LA II
Salve Regina-the Newport C	Comp II
U of Rhode Island	Res II

SOUTH CAROLINA

Aiken Tech C	2-year
Allen U*	LA II
Anderson C	2-year
Baptist C at Charleston	Comp II
Beaufort Tech C	2-year
Benedict C*	LA II
Bob Jones U	Comp I
Central Wesleyan C*	LA II
Chesterfield-Marlboro Tech C	2-year
Citadel, Military C of SC	Comp I
Claflin C*	LA II
Clemson U	Doc I
Clinton JC	2-year
Coker C	LA II
C of Charleston	Comp I
Columbia Bible C	Relig
Columbia C	LA II
Columbia JC of Business	2-year
Converse C	LA II
Denmark Tech C	2-year
Erskine C	LA II
Florence Darlington Tech C	2-year
Francis Marion C	Comp I

SOUTH CAROLINA—Continued

Furman U	Comp I
Greenville Tech C	2-year
Horry-Georgetown Tech C	2-year
Lander C	Comp II
Limestone C*	LA II
Lutheran Theol Southern Seminary	Relig
Medical U of South Carolina	Med
Midlands Tech C	2-year
Morris C	LA II
Newberry C*	LA II
Nielsen Electronics Inst	2-year
North Greenville C	2-year
Orangeburg Calhoun Tech C	2-year
Piedmont Tech C	2-year
Presbyterian C	LA II
Rutledge C at Charleston	2-year
Rutledge C at Columbia	2-year
Rutledge C at Greenville	2-year
Rutledge C at Spartanburg	2-year
Sherman C of Straight Chiropractic	Hlth
South Carolina St C	Comp I
Spartanburg Methodist C	2-year
Spartanburg Tech C	2-year
Sumter Area Tech C	2-year
Tri-County Tech C	2-year
Trident Tech C	2-year
U of South Carolina	
Aiken	Comp II
Beaufort	2-year
Coastal Carolina C	Comp I
Columbia	Res II
Lancaster	2-year
Salkehatchie	2-year

SOUTH CAROLINA—Continued

U of South Carolina	
Spartanburg	Comp I
Sumter	2-year
Union	2-year
Voorhees C	LA II
Williamsburg Tech C	2-year
Winthrop C	Comp I
Wofford C	LA II
York Tech C	2-year

SOUTH DAKOTA

Augustana C	Comp II
Black Hills St C	Comp II
CC of the North Central U Center	2-year
Dakota St C*	LA II
Dakota Wesleyan U	LA II
Huron C*	LA II
Mount Marty C*	LA II
National C	Bus
North American Baptist Seminary	Relig
Northern St C	Comp I
Oglala Lakota C	2-year
Presentation C	2-year
Sinte Gleska C	2-year
Sioux Falls C*	LA II
South Dakota Sch of Mines & Tech	Engr
South Dakota St U	Comp I
U of South Dakota	Doc II

TENNESSEE

American Baptist C of ABT Seminary	Relig
Aquinas JC	2-year

TENNESSEE—Continued

Belmont C	Comp II
Bethel C	LA II
Bristol C	Bus
Bryan C*	LA II
Carson-Newman C	Comp II
Christian Brothers C	Comp II
Church of God Sch of Theology	Relig
Cooper Inst	2-year
Cumberland U*	LA II
David Lipscomb C	Comp II
Draughon's JC at Knoxville	2-year
Draughon's JC at Memphis	2-year
Draughon's JC at Nashville	2-year
Edmondson JC	2-year
Emmanuel Sch of Religion	Relig
Fisk U	LA II
Free Will Baptist Bible C	Relig
Freed-Hardeman C*	LA II
Harding Graduate Sch of Religion	Relig
Hiwassee C	2-year
John A Gupton C	2-year
Johnson Bible C	Relig
King C	LA I
Knoxville Business C	2-year
Knoxville C*	LA II
Lambuth C*	LA II
Lane C*	LA II
Le Moyne-Owen C*	LA II
Lee C*	LA II
Lincoln Memorial U*	LA II
Martin Methodist C	2-year
Maryville C	LA II
McKenzie C	2-year

TENNESSEE—Continued

Meharry Medical C	Med
Memphis C of Art	Art
Memphis Theological Seminary	Relig
Mid-America Baptist Theological Seminary	Relig
Mid-South Bible C	Relig
Milligan C*	LA II
Morristown C	2-year
O'More C of Design	Art
Rhodes C	LA I
Rutledge C	2-year
Scarritt C for Christian Workers*	LA II
Southern C of Optometry	Hlth
Southern C of Seventh-Day Adventists	Comp II
St U & CC System of Tennessee	
Austin Peay St U	Comp I
East Tennessee St U	Comp I
Memphis St U	Doc I
Middle Tennessee St U	Doc II
Tennessee St U	Comp I
Tennessee Technological U	Doc II
Chattanooga St Tech CC	2-year
Cleveland St CC	2-year
Columbia St CC	2-year
Dyersburg St CC	2-year
Jackson St CC	2-year
Motlow St CC	2-year
Nashville St Tech Inst	2-year
Roane St CC	2-year
Shelby St CC	2-year
St Tech Inst at Knoxville	2-year

Continued on Following Page

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Carnegie Foundation's Classifications of Colleges

TENNESSEE—Continued

St U & CC System of Tennessee	
St Tech Inst at Memphis	2-year
Tri-Cities St Tech Inst	2-year
Volunteer St CC	2-year
Walters St CC	2-year
Tennessee Inst of Electronics	2-year
Tennessee Temple U	Comp I
Tennessee Wesleyan C*	LA II
Tomlinson C	2-year
Trevecca Nazarene C*	LA II
Tusculum C*	LA II
Union U*	LA II
U of Tennessee	
Center for the Health Sciences	Med
Chattanooga	Comp I
Knoxville	Res I
Martin	Comp I
U of the South	LA I
Vanderbilt U	Res I

TEXAS

Abilene Christian U	Comp I
Alamo CC District	
St Philip's C	2-year
San Antonio C	2-year
Alvin CC	2-year
Amarillo C	2-year
Amber U	LA II
American Technological U*	LA II
Angelina C	2-year
Angelo St U	Comp I
Arlington Baptist C	Relig
Art Inst of Houston	2-year
Austin C	LA I
Austin CC	2-year
Austin Presbyterian Theological Seminary	Relig
Bauder Fashion C	2-year
Baylor C of Dentistry	Hlth
Baylor C of Medicine	Med
Baylor U	Doc II
Bee County C	2-year
Bishop C*	LA II
Blinn C	2-year
Brazosport C	2-year
Central Texas C	2-year
Cisco JC	2-year
Clarendon C	2-year
C of the Mainland	2-year
Concordia Lutheran C*	LA II
Cooke County C	2-year
Criswell C	Relig
Dallas Baptist U*	LA II
Dallas Christian C	Relig
Dallas County CC District	
Brookhaven C	2-year
Cedar Valley C	2-year
Eastfield C	2-year
El Centro C	2-year
Mountain View C	2-year
North Lake C	2-year
Richland C	2-year
Dallas Theological Seminary	Relig
Del Mar C	2-year
DeVry Inst of Technology	Corp
East Texas Baptist U*	LA II
East Texas St U	Doc II
East Texas St U at Texarkana*	LA II
El Paso County CC	2-year
Episcopal Theological Seminary of the Southwest	Relig

TEXAS—Continued

Frank Phillips C	2-year
Galveston C	2-year
Grayson County JC	2-year
Gulf Coast Bible C	Relig
Hardin-Simmons U	Comp II
Hill C of the Hill JC District	2-year
Houston Baptist U	Comp I
Houston CC	2-year
Howard County JC District	2-year
Howard Payne U*	LA II
Huston-Tillotson C*	LA II
Incarnate Word C*	LA II
Jacksonville C	2-year
Jarvis Christian C*	LA II
Kilgore C	2-year
Lamar U	Comp I
Laredo JC	2-year
Le Tourneau C	LA II
Lee C	2-year
Lon Morris C	2-year
Lubbock Christian C*	LA II
Mc Lennan CC	2-year
Mc Murry C*	LA II
Midland C	2-year
Midwestern St U	Comp I
Miss Wades Fashion Merchandising C	2-year
Navarro C	2-year
North Harris County C District	2-year
North Texas St U	Doc I
Oblate Sch of Theology	Relig
Odessa C	2-year
Our Lady of the Lake U of San Antonio	Comp II
Pan American U	Comp I
Panola JC	2-year
Paris JC	2-year
Parker C of Chiropractic	Hlth
Paul Quinn C*	LA II
Ranger JC	2-year
Rice U	Doc I
Saint Edward's U	Comp II
Saint Mary's U of San Antonio	Comp I
Sam Houston St U	Comp I
San Jacinto C	
Central Campus	2-year
North Campus	2-year
Schreiner C*	LA II
South Plains C	2-year
South Texas C of Law	Law
Southern Bible C	Relig
Southern Methodist U	Doc II
Southwest Texas JC	2-year
Southwest Texas St U	Comp I
Southwestern Adventist C*	LA II
Southwestern Assemblies of God C	Relig
Southwestern Baptist Theological Seminary	Relig
Southwestern Christian C	2-year
Southwestern U*	LA II
Stephen F Austin St U	Comp I
Sul Ross St U	Comp II
Tarrant County JC	2-year
Temple JC	2-year
Texarkana C	2-year
Texas A&M System	
Prairie View A&M U	Comp I
Tarleton St U	Comp I
Texas A&M U, Main Campus	Res I
Texas A&M U Galvestor*	LA II

THE CHRONICLE OF HIGHER EDUCATION

Index

VOLUME XXXIII

September 3, 1986 - August 12, 1987

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TEXAS—Continued

Texas Chiropractic C	Hlth
Texas Christian U	Doc II
Texas C*	LA II
Texas C of Osteopathic Medicine	Med
Texas Lutheran C*	LA II
Texas Southern U	Comp I
Texas Southmost C	2-year
Texas St Tech Inst System	
Amarillo Campus	2-year
Rio Grande Campus	2-year
Sweetwater Campus	2-year
Waco Campus	2-year
Texas Tech U	Doc I
Health Sciences Center	Med
Texas Wesleyan C	Comp II
Texas Woman's U	Doc I
Trinity U	Comp I
Trinity Valley CC	2-year
Tyler JC	2-year
U of Dallas	LA I
U of Houston	
Clear Lake	Comp I
Downtown	Comp I
U Park	Doc I
Victoria*	LA II
U of Mary Hardin-Baylor*	LA II
U of Saint Thomas	Comp II
U System of South Texas	
Corpus Christi St U	Comp I
Laredo St U*	LA II
Texas A&I U	Comp I
U of Texas	
Arlington	Doc II
Austin	Res I
Dallas	Doc II
El Paso	Comp I
Health Science Center at Dallas	Med
Health Science Center at Houston	Med
Health Science Ctr at San Antonio	Med
Medical Branch at Galveston	Med
Permian Basin	Comp II
San Antonio	Comp I
Tyler	Comp I
Vernon Regional JC	2-year
Victoria C	2-year
Wayland Baptist C	Comp II
Weatherford C	2-year
West Texas St U	Comp I
Western Texas C	2-year
Wharton County JC	2-year
Wiley C*	LA II

UTAH

Brigham Young U, Main Campus	Doc I
C of Eastern Utah	2-year
Dixie C	2-year
Latter-Day Saints Business C	2-year
Snow C	2-year
Southern Utah St C	Comp II
Stevens Henager C	2-year
U of Utah	Res I
Utah St U	Res II
Utah Tech C at Provo	2-year
Utah Tech C at Salt Lake	2-year
Weber St C	Comp I
Westminster C of Salt Lake*	LA II

VERMONT

Bennington C	LA I
Burlington C	LA II
Champlain C	2-year
C of Saint Joseph	LA II
Goddard C	LA I
Green Mountain C*	LA II
Marlboro C	LA I
Middlebury C	LA I
Norwich U-Military C of Vermont	Comp II
Saint Michael's C	Comp II
Sch for International Training	Other
Southern Vermont C*	LA II
Sterling C	2-year
Trinity C	LA II
U of Vermont	Doc II
Vermont C	LA II
Vermont Law Sch	Law
Vermont St C's System	
Castleton St C	Comp II
CC of Vermont	2-year
Johnson St C	LA II
Lyndon St C*	LA II
Vermont Tech C	2-year

VIRGINIA

Averett C*	LA II
Bluefield C*	LA II
Bridgewater C*	LA II
CBN U	Other
Christendom C	LA II
Christopher Newport C	Comp I
C of William and Mary	Doc I
Richard Bland C	2-year
Community Hospital of Roanoke Valley	2-year
Eastern Mennonite C*	LA II
Eastern Va Medical Sch of Eastern Va Medical Authority	Med
Emory and Henry C*	LA II
Ferrum C	Comp II
George Mason U	Comp I
Hampden-Sydney C	LA II
Hampton U	Comp I
Hollins C	LA I
Inst of Textile Technology	Corp
James Madison U	Comp I
Liberty U	Comp I
Longwood C	Comp I
Lynchburg C	Comp II
Mary Baldwin C	LA II
Mary Washington C	Comp I
Marymount U	Comp II
National Business C	2-year
Norfolk St U	Comp I
Old Dominion U	Doc II
Presbyterian Sch of Christian Ed	Relig
Protestant Episcopal Theological Seminary in Virginia	Relig
Radford U	Comp I
Randolph-Macon C	LA I
Randolph-Macon Woman's C	LA I
Roanoke C	LA II
Saint Paul's C*	LA II
Shenandoah C and Conservatory of Music	LA II
Southern Seminary JC	2-year
Sweet Briar C	LA I

VIRGINIA—Continued

Union Theological Seminary in Va	Relig
U of Richmond	Comp I
U of Virginia	
Main Campus	Res I
Clinch Valley C*	LA II
Virginia Commonwealth U	Res II
Virginia CC System	
Blue Ridge CC	2-year
Central Virginia CC	2-year
Dabney S Lancaster CC	2-year
Danville CC	2-year
Eastern Shore CC	2-year
Germanna CC	2-year
J Sargeant Reynolds CC	2-year
John Tyler CC	2-year
Lord Fairfax CC	2-year
Mountain Empire CC	2-year
New River CC	2-year
Northern Virginia CC	2-year
Patrick Henry CC	2-year
Paul D Camp CC	2-year
Piedmont Virginia CC	2-year
Rappahannock CC	2-year
Southside Virginia CC	2-year
Southwest Virginia CC	2-year
Thomas Nelson CC	2-year
Tidewater CC	2-year
Virginia Highlands CC	2-year
Virginia Western CC	2-year
Wytheville CC	2-year
Virginia Intermont C*	LA II
Virginia Military Inst	LA II
Virginia Polytechnic Inst and St U	Res I
Virginia St U	Comp I
Virginia Union U*	LA II
Virginia Wesleyan C*	LA II
Washington and Lee U	LA I

WASHINGTON

Art Inst of Seattle	2-year
Bellevue CC	2-year
Big Bend CC	2-year
Central Washington U	Comp I
Centralia C	2-year
City U	Comp II
Clark C	2-year
Columbia Basin CC	2-year
Cornish C of the Arts	Art
Eastern Washington U	Comp I
Edmonds CC	2-year
Everett CC	2-year
Evergreen St C	LA II
Fort Steilacoom CC	2-year
Gonzaga U	Comp I
Grays Harbor C	2-year
Green River CC	2-year
Griffin C	Bus
Heritage C	LA II
Highline CC	2-year
ITT Tech Inst	2-year
John Bastyr C Naturopathic Med	Hlth
Lower Columbia C	2-year
Lutheran Bible Inst of Seattle	Relig
Northwest C of Assemblies of God	Relig
Olympic C	2-year
Pacific Lutheran U	Comp I
Peninsula C	2-year
Puget Sound Christian C	Relig
Saint Martin's C*	LA II
Seattle CC District	
North Seattle CC	2-year
Seattle Central CC	2-year
South Seattle CC	2-year
Seattle Pacific U	Comp I
Seattle U	Comp I
Shoreline CC	2-year
Skagit Valley C	2-year
South Puget Sound CC	2-year
Tacoma CC	2-year
U of Puget Sound	Comp I
U of Washington	Res I
Walla Walla C	Comp II
Walla Walla CC	2-year
Washinton St CC Dist 17	
Spokane CC	2-year
Spokane Falls CC	2-year
Washington St U	Res II
Wenatchee Valley C	2-year
Western Washington U	Comp I
Whatcom CC	2-year
Whitman C	LA I
Whitworth C	Comp II
Yakima Valley CC	2-year

WEST VIRGINIA

Alderson Broaddus C*	LA II
Appalachian Bible C	Relig
Beckley C	2-year
Bethany C	LA I
Bluefield St C	Comp I
Concord C	Comp II
Davis & Elkins C*	LA II
Fairmont St C	Comp I
Glenville St C	Comp II
Huntington JC of Business	2-year
Marshall U	Comp I
National Education Center	
National Inst of Tech Campus	2-year
Ohio Valley C	2-year
Parkersburg CC	2-year
Salem C	
Main Campus*	LA II
Clarksburg	2-year
Shepherd C	Comp I
Southern West Virginia CC	2-year
U of Charleston	Comp II
West Liberty St C	Comp I
WVa C of Graduate Studies	Other
West Virginia Inst of Technology	Comp I
West Virginia Northern CC	2-year
WVa Sch of Osteopathic Medicine	Med
West Virginia St C	Comp I
West Virginia U	Res II
Potomac St C of WVa U	2-year
West Virginia Wesleyan C	Comp II
Wheeling C*	LA II

WISCONSIN

Alverno C*	LA II
Beloit C	LA I
Blackhawk Tech Inst	2-year
Cardinal Stritch C	Comp II
Carroll C	LA I
Carthage C*	LA II
Concordia C*	LA II
District One Tech Inst	2-year
Edgewood C*	LA II
Fox Valley Tech Inst	2-year
Gateway Tech Inst	2-year

WISCONSIN—Continued

Inst of Paper Chemistry	Engr
Lakeland C*	LA II
Lakeshore Tech Inst	2-year
Lawrence U	LA I
Madison Area Tech C	2-year
Madison Business C	2-year
Maranatha Baptist Bible C	Relig
Marian C of Fond Du Lac	LA II
Marquette U	Doc I
Medical C of Wisconsin	Med
Mid-St Tech Inst	2-year
Milwaukee Area Tech C	2-year
Milwaukee Inst of Art and Design	Art
Milwaukee Sch of Engineering	Engr
Moraine Park Voc, Tech and Adult Education District	2-year
Mount Mary C*	LA II
Mount Senario C*	LA II
Nashotah House	Relig
Nicolet C and Tech Inst	2-year
North Central Tech Inst	2-year
Northeast Wisconsin Tech Inst	2-year
Northland C	LA II
Northwestern C	Relig
Ripon C	LA I
Sacred Heart Sch of Theology	Relig
Saint Francis Seminary Sch of Pastoral Ministry	Relig
Saint Norbert C	Comp II
Silver Lake C*	LA II
Southwest Wisconsin Voc Tech Inst	2-year
Stratton C	2-year
U of Wisconsin	
Eau Claire	Comp I
Green Bay	Comp I
La Crosse	Comp I
Madison	Res I
Milwaukee	Doc I
Oshkosh	Comp I
Parkside	Comp I
Platteville	Comp I
River Falls	Comp I
Stevens Point	Comp I
Stout	Comp I
Superior	Comp II
Whitewater	Comp I
Centers	2-year
Viterbo C*	LA II
Waukesha County Tech Inst	2-year
Western Wisconsin Tech Inst	2-year
Wisconsin Conservatory of Music	Art
Wisconsin Indianhead Voc, Tech and Adult Education District	2-year
Wisconsin Lutheran C	2-year
Wisconsin Sch of Electronics	2-year
Wisc Sch of Professional Psych	Other

WYOMING

Casper C	2-year
Central Wyoming C	2-year
Eastern Wyoming C	2-year
Laramie County CC	2-year
Northwest CC	2-year
Sheridan C	2-year
U of Wyoming	Res II
Western Wyoming CC	2-year

US SERVICE SCHOOLS

Air Force Inst of Technology	Other
CC of the Air Force	2-year
Naval Postgraduate Sch	Other
US Air Force Academy	Other
US Army Command and General Staff C	Other
US Coast Guard Academy	Other
US Merchant Marine Academy	Other
US Military Academy	Other
US Naval Academy	Other

AMERICAN SAMOA

American Samoa CC	2-year

GUAM

Guam CC	2-year
U of Guam	Comp I

PACIFIC TRUST TERRITORIES

Christian U, C of the Americas	Relig
CC of Micronesia	2-year
Micronesian Occupational C	2-year
Northern Marianas C	2-year

PUERTO RICO

American C of Puerto Rico	Bus
Antillian C*	LA II
Bayamon Central U	Comp II
Caguas City C	Bus
Caribbean U C	Comp I
Caribbean Center for Advanced Studies	Other
Catholic U of Puerto Rico	Comp I
Center for Advanced Studies on PR and the Caribbean	Other
Conservatory of Music of PR	Art
Electronic Data Processing C of PR	Bus
Huertas JC	2-year
Inst Comercial De Puerto Rico JC	2-year
Inst Tecnico Comercial JC	2-year
Inter American U of Puerto Rico	
Aguadilla Regional C	2-year
Arecibo Regional C	Comp I
Barranquitas Regional C	2-year
Fajardo Regional C	2-year
Guayama Regional C	2-year
Metropolitan Campus	Comp I
Ponce Regional C	2-year
San German Campus	Comp I
Ponce Sch of Medicine	Med
Puerto Rico JC	2-year
Ramirez C of Business & Tech	2-year
Tech C of Municipality of San Juan	2-year
U Central Del Caribe	
Escuela De Medicina De Cayey	Med
U Del Turabo	Comp I
U Metropolitana	Comp I
U Politecnica De Puerto Rico	Engr
U of Puerto Rico	
Cayey U C	Comp I
Humacao U C	Comp I
Mayaguez	Comp I
Medical Sciences Campus	Med
Rio Piedras	Comp I
Aguadilla Regional C	2-year
Carolina Regional C	2-year
La Montana Regional C	2-year
Arecibo Tech U C	Engr
Bayamon Tech U C	Bus
Ponce Tech U C	Engr
U of the Sacred Heart	Comp I

US VIRGIN ISLANDS

C of the Virgin Islands	Comp I

7/14/87 C2175-1

THE CHRONICLE
of Higher Education.

ISSN 0009-5982

July 15, 1987 • $1.95
Volume XXXIII, Number 44

News Summary

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Research in linguistics may provide keys to improving computers and unlocking the secrets of the mind. Story on Page 4.

Restrictions on the flow of U.S. currency to Cuba inhibited Americans' attendance at a scholarly meeting there. Story on Page 5.

With no campus of its own, the National Technological University reaches students by satellite. Story on Page 16.

Gov. Bill Clinton of Arkansas told education officials last week that they must provide new leaders for public schools. Story on Page 19.

Leaders of community colleges have formed a political action committee to increase their lobbying power. Story on Page 19.

The Luce Foundation will inaugurate a new program of support for new and existing Southeast Asia study centers. Story on Page 29.

Some students are refusing to harm animals as part of laboratory experiments. Story on Page 33.

A university committee has found at least 12 violations of N.C.A.A. rules in the athletic program at Virginia Tech. Story on Page 35.

Students and professors at Egypt's government-run universities say the system is beset with inefficiency and declining quality. Story on Page 37.

Thousands of Chinese students are seeking admission to Australian universities. Story on Page 37.

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88 CENTS VS. A DOLLAR

Woman Professors Pressing to Close Salary Gap; Some Colleges Adjust Pay, Others Face Lawsuits

By LIZ McMILLEN

Earning 88 cents for every dollar made by their male colleagues, woman professors are pushing to close the pay gap—a gap they contend is based on illegal sex bias.

Several institutions, including New Mexico State University, Washington State University, and Washington University in St. Louis, are quietly studying, and in some cases, adjusting their faculty salaries.

In the process, university officials are finding that the number-crunching involved is no breeze. Disagreement can crop up about what constitutes a fair salary review and how to adjust disparities.

In other places, change is not coming quietly.

The Universities of Maryland and Mississippi have both been hit by lawsuits charging "a pattern and practice" of sex discrimination in faculty pay. Both suits ask for back pay for female faculty members.

Sex-bias charges are also pending against the State University of New York at New Paltz, where four faculty members have sued over wage disparities. A decision is expected later this summer.

Faculty salaries, 1986-87

	Men	Women
Professor	$46,070	$40,830
Associate Professor	34,280	31,800
Assistant Professor	28,910	26,180
Instructor	22,180	20,590
Lecturer	26,710	22,970

SOURCE: AMERICAN ASSOCIATION OF UNIVERSITY PROFESSORS

Faculty-pay issues could soon go to the U.S. Supreme Court. Women who lost a long-standing case against the Oregon State Board of Higher Education—known as the "Penk Case," after the lead plaintiff, Anna Penk—plan to ask the Court to hear their appeal. A recent Supreme Court ruling in a non-college case may make wage-discrimination cases easier for women to win in the lower courts.

Colleges and universities, especially public institutions, are actually ahead of the nation's businesses in adjusting the pay gap, according to the National Committee on Pay Equity.

About 220 colleges and universities have recently done salary-equity studies, some at the direction of state legislatures, committee officials say. As of this spring, about 100 have made adjustments for either faculty members or clerical workers, and sometimes for both.

Until now, the depressed academic job market has staved off many com-

Continued on Page 14, Column 3

State Leaders Urged to Intensify Colleges' Efforts to Enroll and Graduate More Minority Students

By SCOTT JASCHIK

State leaders must start major new efforts to insure that minority students attend and graduate from college, say two new reports.

"We simply can no longer content ourselves with progress that is episodic, grudging, and vulnerable to quick reversal at the slightest hint of benign indifference," says a report that will be issued this week by the State Higher Education Executive Officers.

That report and one issued last week by SHEEO and the Education Commission of the States contrast the major improvements in the educational status of minority students in the 1960's to the stagnation of recent years.

'The Conscience of the Nation'

"In the decade of the sixties, the conscience of the nation was awakened once again to the disparity between its ideals and reality," the E.C.S. report says. "First reluctantly and then enthusiastically, higher education opened its doors to large numbers of minorities who had been excluded.

"More than midway through the 1980's it is appropriate that we ask the question: How are we doing? Unfortunately the answer must be: Not good enough. Progress toward full participation of minorities in higher education has become distressingly stalled."

Larger Proportion of Enrollment

In addition to noting the altruistic reasons for college and state officials to concern themselves with the problems of minority students, both reports stress that minority-group members will make up a larger and larger proportion of the college-age population in the years ahead.

"If moral concern is not sufficient as an imperative, self-interest alone eventually will dictate, perhaps too late, the high priority these issues deserve," says the SHEEO report.

T. Edward Hollander, chancellor of the

Continued on Page 22, Column 1

A Lengthy Debate Likely on Ways to Split Funds for Campus Facilities

By COLLEEN CORDES

WASHINGTON

Congress seems serious about designing a new federal program to modernize campus research facilities. But a crucial issue remains unresolved: how to split up the pot, whatever its size might be.

The House-passed trade bill authorizes money for campus research facilities, and two other bills are making their way through committees, one in the House and one in the Senate. Whether Congress will come up with a final program this year is problematical, but the debate now going on over how to divide up the money will almost certainly determine the shape of whatever plan ultimately emerges.

At stake are more than mere buildings, or the clamor of individual institutions for their fair share of federal funds.

The ultimate issue is whether the current distribution of federal resources for research best serves the national interest. A

Continued on Page 24, Column 1

MATHEMATICIAN SHORTAGE

"The people to staff universities in the 1990's are not in the pipeline right now. We're not producing enough young scientists to staff our universities down the road. We do not have enough Americans."

Story on Page 11

'In' Box

It cost $13,377 to find a new chancellor for the University of Wisconsin at Madison. Nearly half of that was spent on bed and board for the search committee at a Chicago hotel.

The *Capital Times*, a Madison newspaper, obtained vouchers and hotel receipts for the search, and recently published a breakdown—down to the last dinner.

In fact, the university's foundation kicked in more than $3,000 because committee members spent more than the state limit—$12 apiece—on their dinners.

During the interviews, the newspaper reported, panelists ordered room service seven times, summoning sweet rolls, sandwiches, yogurt, and assorted beverages.

A student member of the panel, Rob Koenig, had a little room left for dessert. He spent $23 for in-room movies.

•

It pays for college administrators to have healthy hearts and lungs.

That's why department chairmen, deans, and vice-presidents attending a seminar at Texas A&M University this week will be run through a battery of stress tests.

Along with sessions on financing and fund raising, the participants can take an EKG exam, have their body fat analyzed, and get their blood tested.

"Most of these folks are new to the administrative scene," says Bryan R. Cole, associate dean of the university's college of education. "They'll be dealing with stress factors they haven't felt before."

That's especially true if the administrators are from Texas, Mr. Cole adds. "We have our share of budgetary problems and role conflicts for administrators."

•

An applicant's spouse should be interviewed, too, when that applicant is being seriously considered for a community-college presidency, a new report says.

The Presidential Team: Perspectives on the Role of the Spouse argues that an interview will make clear what trustees expect of the spouse. The report includes essays by male and female spouses, as well as other experts.

George B. Vaughan, president of Piedmont Virginia Community College and editor of the report, calls on trustees to pay the spouse's way to professional meetings. He also urges the American Association of Community and Junior Colleges to establish a council on spouses.

Bonnie P. McCabe, married to the president of Miami-Dade Community College, offers personal advice to other "charming and gracious" spouses tired of the title. Her essay: "I Don't Have a Bouffant."

The report is available for $12.50 from A.A.C.J.C. Publications, 80 South Early Street, Alexandria, Va. 22304. To order by credit card, call 1-800-336-4776; in Virginia, (703) 823-6966.

PERSONAL & PROFESSIONAL

Fewer and Fewer Americans Take Graduate Work in Mathematics; Peril to Nation's Prosperity Seen

Foreign students flood departments, but many return home after they earn their degrees

By SCOTT HELLER

WASHINGTON

The nation's prosperity could be hampered by the continuing decline in the number of Americans studying mathematics in graduate school, a new study warns.

Graduate enrollments are holding steady in mathematics only because of an influx of foreign-born students, many of whom leave the United States after they receive their degrees, the study indicates. It was conducted for the Conference Board of the Mathematical Sciences, a consortium of 14 professional societies.

"The prognosis for the continuing vitality of mathematics is somewhat bleak," the study says. Increasing numbers of foreign graduate students have already led to some language problems in the classroom and may make America "hostage to foreign policy" in securing bright students from such places as China, it adds.

Members of the committee who prepared the report said it confirmed anecdotal evidence of a shift in graduate populations. But they cautioned that the problem was not too many foreigners, but too few Americans.

In addition, the statistics they gathered painted a similar picture in computer science, economics, and physics, and a grimmer view in engineering.

Worsened in Last 10 Years

"The problem has gotten steadily worse in the past 10 years," said Willard Miller, professor of mathematics at the University of Minnesota and a member of the panel. "Many Americans who are interested in science and technology are leaving college at the bachelor's level to go into industry. They're not going on to do graduate work."

The study collected information from National Science Foundation reports through 1984. The committee supplemented that with information culled from a 1986 survey of 38 graduate departments.

In 1984, the N.S.F. numbers show, more than 40 per cent of graduate students in mathematics were foreign, up from nearly 33 per cent in 1980 and almost 24 per cent in 1977.

The number of Americans studying for graduate degrees in mathematics dropped from 7,910 to 6,710 between 1977 and 1984. During the same period, the number of foreign students nearly doubled, from 2,455 to 4,513.

Indications are that the problem is getting worse. At the leading departments in 1986, 46.2 per cent of first-year graduate students were foreign, up from 22.4 per cent in 1977. In two of the departments all of the students were foreign. In almost one-fourth of the departments, fewer than 30 per cent of the incoming doctoral candidates were American citizens.

Similar trends are evident in the faculty ranks, as well. In 1986, slightly more than 45 per cent of untenured faculty members were foreign, up from 36 per cent the year before and almost 27 per cent in 1977.

A bigger proportion of full professors between ages 40 and 60 are American citizens than those either older or younger, a circumstance that panel members attributed to booming interest in science and mathematics after the Sputnik launch.

Indeed, the panel urged mathematicians to communicate the importance of math education to students today. "We need to persuade young people that this is a field they want to go into," Mr. Miller said.

Panel Raises Questions

The panel speculated that noncompetitive academic salaries, a materialistic society, and interest in computer programming may be diverting top students away from graduate study. It called for further research on questions such as these:

► What has happened to America's best potential mathematicians, as measured by various national high-school exams?

► What is the distribution of foreign graduate students by country of origin? How many foreign citizens have permanent-residency status in the United States?

► What is the situation in statistics departments?

The panel's report notes that expected faculty retirements make the situation especially pressing now. In addition, the re-

Continued on Following Page

Foreign Graduate Students in the Sciences

	1980		1986	
	Number	Per cent of total	Number	Per cent of total
Engineering	17,999	41.8%	24,395	42.4%
Mathematical sciences	3,254	32.9%	4,892	40.9%
Computer sciences	2,066	31.4%	5,362	38.1%
Physical sciences	5,744	25.1%	8,468	31.8%
Agricultural sciences	2,226	22.3%	2,314	25.4%
Social sciences	10,192	18.0%	11,357	22.4%
Biological sciences	4,588	12.1%	6,466	17.1%
Environmental sciences	1,399	12.8%	1,695	14.7%
Health sciences	2,052	8.4%	2,621	11.3%
Psychology	1,210	4.5%	1,230	4.7%

Note: Covers only full-time students. SOURCE: NATIONAL SCIENCE FOUNDATION

Health Problems Afflict Workers in Veterinary Building at U. of Florida

GAINESVILLE, FLA.

Shortly after moving into a new office at the University of Florida's veterinary college, Pamela P. Humphrey's face began to redden and a rash broke out on her hands.

Her colleagues began to complain of headaches and eye irritations that prevented some from wearing their contact lenses. Eventually even Ms. Humphrey, who does not wear such lenses, said her eyes were so red "I looked like I was coming off of a 10-day drunk."

$2.6-Million in Emergency Aid

As more people spoke out, the list of symptoms grew to include fatigue, nausea, dizziness, and mental disorientation.

Last month, the Florida Legislature appropriated $2.6-million in emergency aid to fix ventilation problems that are believed to be causing the health problems at the Veterinary Medical Teaching Hospital.

Part of the money will go toward moving the employees with the most severe complaints. So far, 45 of the building's 392 occupants have been moved to offices and laboratories set up in nearby trailers, and an additional 15 are expected to be moved soon. Anywhere from one-third to three-quarters of the hospital's employees have suffered some symptoms, according to medical reports.

Ms. Humphrey, who supervises the teaching hospital's clinical-pathology unit, says employees both in and out of the building are worried.

"We're concerned that some of these things may be long-lasting," she said. "We'd really like to see everyone the heck out of there."

Although everyone agrees that something in their work environment is causing the complaints, no one knows for sure how serious the health problems are. Some employees have not been affected, while others say they can no longer function in the hospital building.

The university has already spent nearly $1-million trying to correct the problems. Several national consultants were brought in and diagnosed the situation as "tight building syndrome," an affliction typical of buildings constructed in the 1970's.

Because of skyrocketing oil prices, many energy-efficient buildings were constructed with inadequate ventilation, including small windows that did not open. The same health symptoms described at the university's hospital have cropped up in other similarly constructed buildings, the consultants said.

Ventilation Problems Cited

Between 1978 and 1981, the National Institute of Occupational Safety and Health conducted 115 investigations of buildings that were suspected of making their occupants ill. In most of those cases, although the exact number was not available, ventilation problems were believed to be the cause, according to the institute. The num-

Continued on Following Page

Health Problems Hit Fla. Building

Continued from Preceding Page

ber of complaints had tripled since the last three-year period, a fact that investigators attribute to more buildings' being constructed with energy efficiency in mind.

Actions Taken; Problems Persist

In the past year the University of Florida has built a new roof to stop leaks that had been feeding mold growths, relocated the pathology unit, where most of the complaints had originated, adjusted the air conditioning and heating systems, and hired a practical nurse to monitor health complaints.

Still, the problems persisted.

Last month, workers circulated a petition declaring "a medical emergency" and calling for the immediate evacuation of the sickest workers. The petition read, in part: "No one person has the right to expect other people to stay in a building that is causing health problems to so many individuals. We are intensely loyal to the Veterinary College, but there comes a time when a decision has to be made on whether the cost is too high to pay. Our level of on-the-job performance is slipping both in quantity and quality. We can no longer guarantee a first-rate service to our clients and our students."

With the help of a Florida state representative and the state Board of Regents, they were able to gain the emergency funds to begin work on revamping the building's entire ventilation system. That could take up to two years, according to Arline Dishong, spokeswoman for the university's Health Science Center.

Ms. Humphrey, whose division is operating out of a trailer for the time being, believes the hospital should have been shut down entirely and everyone evacuated.

But Ms. Dishong said none of the consultants who visited the hospital felt the problems were serious enough to warrant a total evacuation.

No Evidence from Consultants

"The situation is serious from the standpoint that none of our administrators want people to continue working in an environment where they'll keep getting sick," she said. "But the various consultants who have studied the building have come up with no evidence that this poses a serious threat to anyone's health over the long term."

—KATHERINE S. MANGAN

Fewer Americans Study Mathematics

Continued from Preceding Page

port urges administrators to "come to grips" with the fact that undergraduates are increasingly resentful of teachers with "accents which are so thick that they are only marginally understandable to students."

The panel did not recommend spoken fluency examinations as a condition for acceptance to graduate school, noting that such tests are difficult to administer and could keep away bright students.

Instead, the report urges that first-year foreign graduate students be hired only to grade papers until they demonstrate spoken fluency. It also calls on mathematics departments to urge "formal instruction" in spoken English, rather than "praying that the students will 'pick it up' " by attending classes, as is done in many places.

That, in turn, means that graduate departments should expect foreign students to meet certain requirements at a slightly slower pace, the report adds.

'A Very Scary Picture'

A 1985 survey of 464 departments, conducted for the Mathematical Association of America, indicated that such changes could lead to staffing problems. It found that more than one-third of all mathematics classes were taught by teaching assistants or part-time instructors.

"The people to staff universities in the 1990's are not in the pipeline right now," said Bettye Anne Case, associate professor of mathematics at Florida State University. "A very scary picture is emerging: We're not producing enough young scientists to staff our universities down the road. We do not have enough Americans."

New Books on Higher Education

It may be necessary to add state tax to the cost of books listed below. Discounts may be available to scholars and to people who order in bulk.

Access to Quality Undergraduate Education in the Two-Year College: A Report to the Southern Regional Education Board by Its Commission for Educational Quality (Southern Regional Education Board, 592 Tenth Street, N.W., Atlanta 30318; 14 pages; $4.50 prepaid).

The Administration of Public Safety in Higher Education, by David Nichols (Charles C. Thomas, Publisher, 2600 South First Street, Springfield, Ill. 62794; 254 pages; $39.75 prepaid). Discusses the hiring of campus security personnel and other aspects of public-safety administration at colleges and universities.

Curriculum Management for Schools, Colleges, Business, by Fenwick W. English (Charles C. Thomas, Publisher, 2600 South First Street, Springfield, Ill. 62794; 306 pages; $44.75 prepaid).

Developing an LD Program: A Guide for Colleges and Universities, by John P. Branson (C.C.I.U. Publications, Chester County Intermediate Unit, 1530 Lincoln Highway, Coatesville, Pa. 19320; 43 pages; $25, plus $2.50 for shipping). Contains guidelines for establishing programs for students with learning-disabilities.

Developing Occupational Programs (New Directions for Community Colleges No. 58), edited by Charles R. Doty (Jossey-Bass Publishers, 433 California Street, San Francisco 94104; 111 pages; $11.95 prepaid). A collection of essays on how community colleges can meet the needs of a changing American work force.

Ethical Dilemmas for Academic Professionals, edited by Stephen L. Payne and Bruce H. Charnov (Charles C. Thomas, Publisher, 2600 South First Street, Springfield, Ill. 62794; 241 pages; $29.75 prepaid).

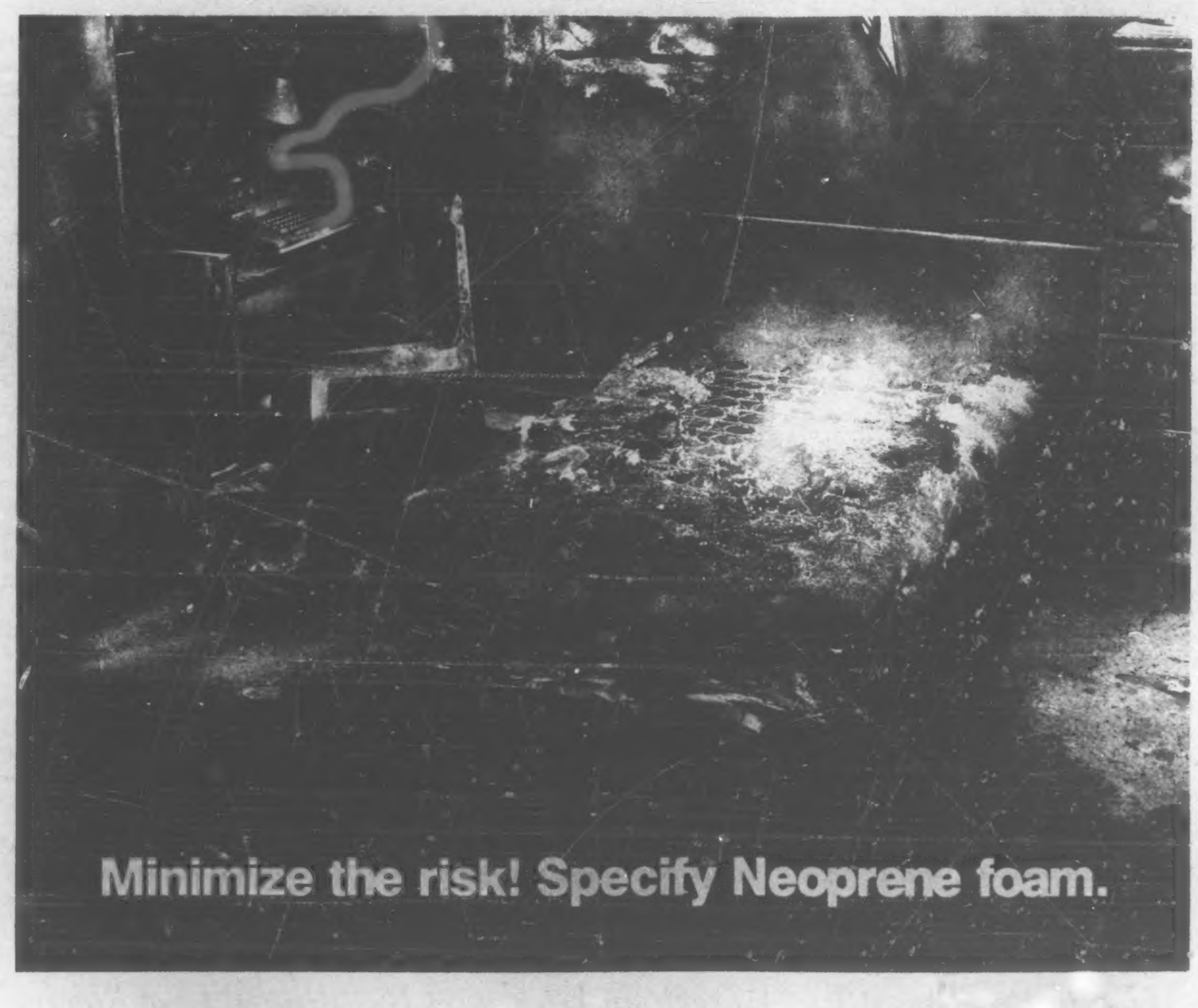
Financing Higher Education: Strategies After Tax Reform (New Directions for Higher Education No. 58), edited by Richard E. Anderson and Joel W. Meyerson (Jossey-Bass Publishers, 433 California Street, San Francisco 94104; 107 pages; $11.95 prepaid). Comprises papers prepared for the Forum for College Financing Alternatives, a research project of the National Center for Postsecondary Governance and Finance; the papers were presented at a conference held in Annapolis, Md., in October 1986.

A Guide to Higher Education for Learning Disabled Students, by John P. Branson (C.C.I.U. Publications, Chester County Intermediate Unit, 1530 Lincoln Highway, Coatesville, Pa. 19320; 204 pages; $20, plus $2.50 for shipping).

National College Databank, fourth edition, edited by Kim R. Kaye (Peterson's Guides, P.O. Box 2123, Princeton, N.J. 08540; 465 pages; $12.95, plus $2.75 for shipping). Presents data grouped to show which colleges and universities share certain characteristics, from unusual majors, for example, to low freshman attrition rates.

A Progress Report and Recommendations on Educational Improvements in the S.R.E.B. States: A Report to the Southern Regional Education Board by Its Commission for Educational Quality (Southern Regional Education Board, 592 Tenth Street, N.W., Atlanta 30318; 45 pages; $6.50 prepaid).

Responding to the Needs of Today's Minority Students (New Directions for Student Services No. 38), edited by Doris J. Wright (Jossey-Bass Publishers, 433 California Street, San Francisco 94104; 117 pages; $11.95 prepaid).



Specially formulated Neoprene foam (left) exceeds other foam cushioning materials (right) in open-flame ignition tests.

A sobering statistic: 43% of fatal, residential fires start in upholstered furniture, mattresses or bedding.* Don't contribute unknowingly to such a tragedy. Specify furnishings that contain specially formulated Neoprene foam, and you could help prevent injuries and property damage.

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IDEAS

By Zoë Ingalls

- **'Job club' aids students seeking work**
- **Dormitory newspaper becomes a poster**

FOR THE SOON-TO-BE or recent college graduate, finding that first job is a time-consuming and often daunting experience. Indeed, Southwestern University's career-development director compares jobhunting to the process of grieving over the loss of a loved one.

"The student's loss has to do with a loss of identity—giving up the identity you've had for the last 16 years and trying to move into the wider world," says E. Anne Matthews, the director.

"There's a certain amount of grief over losing the safe definition of self and struggling with all the questions you have to answer to form a new life for yourself," she says. "A lot of procrastination goes on in jobhunting, as a way of avoiding the reality, and a lot of people going through the grief process will do that to avoid facing the loss."

To help Southwestern students with their search, and incidentally to deal with their "loss," Ms. Matthews last month offered an experimental program she calls a "job club," a support group for recent graduates and for students who will graduate in the next year.

The club is based on techniques developed in the 1970's to help industrial workers who had been laid off, Ms. Matthews says. The approach seemed well suited to her philosophy of emphasizing career counseling over placement in a specific job.

She explains that career-development staff members at small liberal-arts institutions such as Southwestern—where the enrollment is just over 1,000—face different challenges from those of their counterparts at large universities, who are able to attract recruiters from large companies. In general, recruiters do not visit smaller institutions, so Ms. Matthews says she has worked to train students to become good jobhunters—"everything from figuring out a major and career choices, to writing a résumé."

Here's how the job club worked: The participants met twice a week for three hours to discuss their goals and their progress. They also reported on their successes and failures and shared insights and information.

"For someone who is jobhunting, this is their life—they wake, eat, sleep, and dream jobhunting," Ms. Matthews says. "There is a low-level anxiety they feel about not having a job all of the time."

In addition to the group discussions, job-club meetings included brief lectures by Ms. Matthews on such topics as résumé writing, interviewing skills, and business etiquette. The club's members were also encouraged to read two books, *The Job Search Companion*, by Ellen J. Wallach, and *Finding a Job*, by Mason H. Azrin and Victoria B. Besalel.

Last month's experiment was so successful that Ms. Matthews will now use it as a model for a semester-long job club beginning this fall, for students who will graduate in December, and repeating in the spring.

For more information, contact E. Anne Matthews, director, Office of Career Development, Southwestern University, Georgetown, Tex. 78626.

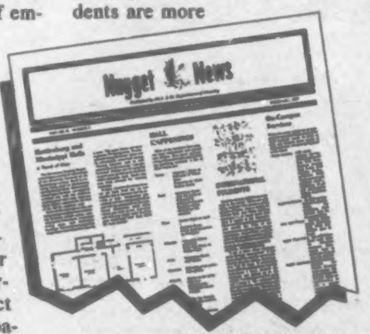
■

IT'S NOT UNCOMMON for a university's housing department to publish an in-house newspaper. In general, the formats range from mimeographed 8½-by-11-inch flyers to tabloid-size newspapers—whatever it takes to deliver the desired message.

At the University of Southern Mississippi, the paper just wasn't being read. So the university's Department of Housing and Residence Life took a new tack—exchanging its four-page tabloid for heavy-duty, poster-size paper suitable for display on bulletin boards.

Three issues of the *Nugget News* later, officials report that they are pleased with the response.

"In general, it seems that residents are more apt to read a poster, placed conspicuously, than they are to read a four-page newspaper," says Ruth C. Garvey, coordinator of residential student development. "One can, for example, read a few articles while waiting for an elevator."



U. OF SOUTHERN MISSISSIPPI

Southern Mississippi publishes news on heavy-duty, poster-size paper.

Recent editions of the *Nugget News* have included articles on flooding in one of the dormitories, exam "survival" skills, and special evening programs slated for each dormitory.

Although the posters are more expensive to produce than the paper, fewer of them are required, so that production costs have remained about the same.

For more information, contact Ruth C. Garvey, coordinator of residential student development, University of Southern Mississippi, Southern Station Box 5064, Hattiesburg, Miss. 39406.

Female Faculty Members Press to Close Salary Gap

Continued from Page 1

plaints. With a job shortage, "women were more willing to put up with salary inequities," says Barbara R. Bergmann, a professor of economics at the University of Maryland at College Park.

But with more jobs—and more women filling them—women are asking why they are paid less than men with the same background and experience. Women are also taking a cue from state and local government workers, who have made considerable salary gains.

Many have become dissatisfied with the slow pace of change since the 1970's, when colleges first studied and raised salaries under pressure from the federal government.

"This issue really needs to come out of the closet," says Margaret C. Lumpkin, a retired professor of education at Oregon State University and one of the lead plaintiffs in the Peak case. "Every year, studies show significant disparities. Everyone pretends that women are second-class citizens and should be paid that way."

Myra Dinnerstein, whose salary was raised by more than $10,000 in a review at the University of Arizona, had no idea she was so far behind.

"I certainly thought I was probably behind, but not that much," says Ms. Dinnerstein, director of the women's studies program and the Southwest Institute for Research on Women. "Even if I had been aware, there was no mechanism to change it."

Big Gap for Full Professors

Nationally, the biggest wage difference is for full professors. In that rank, men earn $46,070, compared to $40,630 for women.

The gap in faculty salaries is actually easier to deal with than inequities in the tenure and promotion process, where discrimination is much more subtle and much harder to prove, administrators and professors agree.

But pinpointing sex as the significant factor behind pay discrepancies is not as easy as it sounds.

Many salary studies involve complicated regression analyses, in which certain variables—such as years of experience, degrees, discipline, and sometimes faculty rank—are held constant to see if there are still differences in the treatment of men and women.

Another less formal approach involves selecting male faculty "counterparts" for comparison against women.

"Running a careful analysis is the single biggest sticking point" for colleges, says Mary W. Gray, an expert on pay equity who has helped 25 institutions conduct salary surveys. Ms. Gray is a professor of mathematics, statistics, and computer sciences at the American University.

DOUGLAS GORALSKI

American U.'s Mary W. Gray: Analyzing salary discrepancies "is the single biggest sticking point" for colleges.

Administrators at Washington State University know that sticking point all too well. At the urging of two women's faculty groups, the university is reviewing the salaries of 160 women and minority-group members.

"Just getting through the process and finding all the information is very difficult," says Ronald H. Hopkins, university vice-provost. "The consequences will be difficult, too, if people don't get as much as they think they should."

Women and minority-group members were asked to select a "comparable" white male professor with similar degrees, teaching loads, and publications with whom they could be compared.

The faculty members submitted their applications, including curricula vitae for themselves and their "comparables," to their deans, who made recommendations about raises.

A few faculty members in humanities disciplines wanted to be compared to economics and marketing professors, who are typically higher paid—which is not what administrators anticipated. "Our intent was to examine discrimination as a factor, not market forces," says Mr. Hopkins.

The university opted for the "comparable" method because its officials thought it would be easier for people to understand. But it has also produced its own set of troubles.

Although most male comparables were from the same department, some fields, such as nursing, have very few men. In those cases, the university tried to find men in similar disciplines for comparisons.

A few male professors voiced concern about the reviews' invading their privacy. Other faculty members declined to participate in a process they felt was "too adversarial," according to Susan Armitage, a member of the university's Association for Faculty Women.

Nevertheless, people seem relatively pleased so far. The study "was exploratory to see if we had a problem and what we could do," says Mr. Hopkins. "We found one, and we think we're doing something positive."

Review at New Mexico State U.

At New Mexico State University, now reviewing the salaries of 482 faculty members, professors and administrators have differed over whether pay gaps are due to sex or some other factor.

Officials hope to avoid the problem this year by trying to eliminate all vestiges of sex bias from their salary analysis. That involves looking first at whether there is built-in sex bias in faculty ranks.

"Some people feel women are in lower ranks and therefore have lower salaries, when in fact they belong in higher ranks," based on their qualifications, explains Miriam A. Meyer, coordinator of institutional studies.

"Before we do the salary study, we have to make sure there is no gender discrimination in the ranks, otherwise that would skew the whole salary picture."

Differences of opinion about whether sex is a factor in pay differences have arisen in significant court cases, as well.

In *Penk* v. *Oregon State Board of Higher Education*, lawyers collected some 25,000 pages of documents, claiming that an average $2,000 gap between men and women was evidence of discrimination. The case represents 1,000 women in the state.

The U.S. Court of Appeals for the Ninth Circuit ruled that while statistics might show disparities, the plaintiffs had not proved deliberate discrimination. The women plan to ask the Supreme Court to hear their appeal.

Deadlock in Colorado

Until last year, faculty members and administrators at the University of Colorado were deadlocked over the proper procedures for evaluating salaries. A group of women threatened to file a class-action lawsuit.

The university wanted to review only the most extreme cases of inequities, while woman faculty members urged reviews of all women and minority-group members.

The two sides eventually agreed on a "counterpart" method for all faculty members. Similar to the Washington State approach, female professors were compared to men with comparable records in teaching, research, and service.

Some $397,000 in raises went to 132 professors, most of them in the $4,000 to $5,000 range.

The University of Maryland at College Park has completed several pay studies and increased women's salaries, but faculty plaintiffs claim the raises were not enough and should have been given retroactively. Ten women have sued on behalf of all tenured female professors.

A lawyer for the women says the wage gap has varied from year to year, but ranges between $1,000 to $1,700 at all faculty ranks.

"The university has made some efforts, but the women felt the commitment wasn't there, the resources weren't there, and the process just wasn't adequate," says Wendy L. Kahn, who represents the plaintiffs.

A lawyer for the university disagrees, saying it has been in the "forefront" of pay-equity issues.

Savings in the Long Run

Ms. Gray and other experts say internal pay-equity reviews can actually save institutions money in the long run, even if salaries are ultimately boosted.

For one, studies can help colleges stay out of court, where women have a better chance of winning pay-discrimination lawsuits than they do other cases, according to a new book, *Academics in Court: The Consequences of Faculty Discrimination Litigation*.

A Supreme Court ruling last year may give woman professors an even better chance of winning, some legal observers say.

The Court's decision in *Bazemore* v. *Friday* effectively shifted the burden of proof in wage-discrimination cases to employers, who must demonstrate that there are reasons besides discrimination for pay disparities. The Court also said it is not enough to give equal raises—employers may also be forced to equalize salaries, if discrimination is proved.

Warns Ms. Gray: "Colleges should not wait to be sued. In court, there will be too many hard feelings and too much rubbing of salt on wounds."

FACT–FILE

Earned Degrees Conferred in 1984-85 by U.S. Colleges and Universities

Public institutions	Bachelor's degrees			Master's degrees			Doctor's degrees		
	Men	Women	Total	Men	Women	Total	Men	Women	Total
Agriculture, natural resources	12,083	5,392	17,475	2,693	1,025	3,718	1,024	171	1,195
Architecture, environmental design	4,546	2,362	6,908	1,462	756	2,218	39	14	53
Area studies	507	755	1,262	248	207	455	37	30	67
Business, management	82,826	68,609	151,435	18,585	8,585	27,170	495	100	595
Communications	11,951	17,447	29,398	855	1,133	1,988	105	64	169
Communications technologies	489	488	977	6	21	27	2	0	2
Computer, information sciences	16,205	9,329	25,534	2,707	1,086	3,793	135	17	152
Education	17,121	51,168	68,289	15,739	40,501	56,240	2,564	2,735	5,299
Engineering	48,901	7,980	56,881	12,105	1,370	13,475	1,885	108	1,993
Engineering technologies	12,570	1,174	13,744	476	55	531	8	1	9
Foreign languages	1,514	4,164	5,678	390	799	1,189	106	138	244
Health sciences	6,529	34,388	40,917	2,272	8,424	10,696	421	401	822
Home economics	715	12,388	13,103	186	1,623	1,809	69	185	254
Law	261	402	663	229	59	288	44	15	59
Letters	7,106	13,509	20,615	1,605	2,983	4,588	408	435	843
Liberal/general studies	6,522	7,066	13,588	204	360	564	12	8	20
Library science	20	148	168	541	2,298	2,839	28	29	57
Life sciences	12,260	11,058	23,318	2,063	1,770	3,833	1,724	782	2,506
Mathematics	5,306	4,335	9,641	1,443	802	2,245	383	69	452
Military science	269	26	295	118	1	119	0	0	0
Parks and recreation	1,506	2,501	4,007	209	267	476	22	13	35
Philosophy and religion	1,170	617	1,787	213	95	308	108	26	134
Physical sciences	11,515	4,053	15,568	3,293	982	4,275	1,554	379	2,333
Protective services	5,946	3,858	9,804	439	257	696	20	6	26
Psychology	7,975	16,718	24,693	1,470	2,424	3,894	826	699	1,525
Public affairs, services	2,570	6,162	8,732	3,344	6,224	9,568	85	86	171
Social sciences	30,918	23,300	54,218	3,844	2,405	6,249	1,187	535	1,722
Theology	2	1	3	0	0	0	0	0	0
Visual and performing arts	8,660	13,869	22,529	2,259	2,877	5,136	245	177	422
Multi/interdisciplinary studies	5,525	5,491	11,016	796	817	1,613	114	64	178
All fields	323,488	328,758	652,246	79,794	90,206	170,000	14,050	7,287	21,337

Private institutions	Bachelor's degrees			Master's degrees			Doctor's degrees		
	Men	Women	Total	Men	Women	Total	Men	Women	Total
Agriculture, natural resources	394	238	632	153	57	210	12	6	18
Architecture, environmental design	1,473	944	2,417	686	371	1,057	27	9	36
Area studies	592	1,013	1,605	216	208	424	49	21	70
Business, management	45,206	36,710	81,916	28,039	12,318	40,357	223	48	271
Communications	4,367	6,593	10,960	592	880	1,472	33	26	59
Communications technologies	431	317	748	123	59	182	3	1	4
Computer, information sciences	8,374	4,970	13,344	2,357	951	3,308	88	8	96
Education	4,143	15,729	19,872	5,206	14,691	19,897	855	997	1,852
Engineering	17,058	3,215	20,273	6,579	872	7,451	1,129	99	1,228
Engineering technologies	4,924	283	5,207	89	11	100	0	0	0
Foreign languages	1,136	3,140	4,276	169	366	535	78	115	193
Health sciences	3,257	20,339	23,596	1,863	4,824	6,687	144	233	377
Home economics	301	2,151	2,452	93	481	574	9	13	22
Law	188	306	494	1,148	360	1,508	44	2	46
Letters	4,557	8,919	13,476	459	887	1,346	164	232	396
Liberal/general studies	2,049	3,554	5,603	245	371	616	16	17	33
Library science	6	28	34	217	837	1,054	11	19	30
Life sciences	7,804	7,323	15,127	584	642	1,226	583	343	926
Mathematics	2,858	2,647	5,505	431	206	637	207	40	247
Military science	4	0	4	0	0	0	0	0	0
Parks and recreation	233	353	586	32	36	68	1	0	1
Philosophy and religion	3,074	1,539	4,613	488	371	859	269	65	334
Physical sciences	5,580	2,584	8,164	1,159	362	1,521	897	173	1,070
Protective services	1,748	958	2,706	411	128	539	7	0	7
Psychology	4,719	10,399	15,118	1,574	2,940	4,514	666	717	1,383
Public affairs, services	2,065	3,041	5,106	2,594	3,883	6,477	128	132	260
Social sciences	20,254	16,989	37,243	2,556	1,575	4,131	746	383	1,129
Theology	4,401	1,635	6,036	2,846	1,506	4,352	1,036	104	1,140
Visual and performing arts	5,846	9,561	15,407	1,638	1,940	3,578	162	109	271
Multi/interdisciplinary studies	1,998	2,713	4,711	1,049	522	1,571	63	44	107
All fields	159,040	168,191	327,231	63,596	52,655	116,251	7,650	3,956	11,606

All institutions	Bachelor's degrees			Master's degrees			Doctor's degrees		
	Men	Women	Total	Men	Women	Total	Men	Women	Total
Agriculture, natural resources	12,477	5,630	18,107	2,846	1,082	3,928	1,036	177	1,213
Architecture, environmental design	6,019	3,306	9,325	2,148	1,127	3,275	66	23	89
Area studies	1,099	1,768	2,867	464	415	879	86	51	137
Business, management	128,032	105,319	233,351	46,624	20,903	67,527	718	148	866
Communications	16,318	24,040	40,358	1,447	2,013	3,460	138	90	228
Communications technologies	920	805	1,725	129	80	209	5	1	6
Computer, information sciences	24,579	14,299	38,878	5,064	2,037	7,101	223	25	248
Education	21,264	66,897	88,161	20,945	55,192	76,137	3,419	3,732	7,151
Engineering	65,959	11,195	77,154	18,684	2,242	20,926	3,014	207	3,221
Engineering technologies	17,494	1,457	18,951	565	66	631	8	1	9
Foreign languages	2,650	7,304	9,954	559	1,165	1,724	184	253	437
Health sciences	9,786	54,727	64,513	4,135	13,248	17,383	565	634	1,199
Home economics	1,016	14,539	15,555	279	2,104	2,383	78	198	276
Law	449	708	1,157	1,377	419	1,796	88	17	105
Letters	11,663	22,428	34,091	2,064	3,870	5,934	572	667	1,239
Liberal/general studies	8,571	10,620	19,191	449	731	1,180	28	25	53
Library science	26	176	202	758	3,135	3,893	39	48	87
Life sciences	20,064	18,381	38,445	2,647	2,412	5,059	2,307	1,125	3,432
Mathematics	8,164	6,982	15,146	1,874	1,008	2,882	590	109	699
Military science	273	26	299	118	1	119	0	0	0
Parks and recreation	1,739	2,854	4,593	241	303	544	23	13	36
Philosophy and religion	4,244	2,156	6,400	701	466	1,167	377	91	468
Physical sciences	17,095	6,637	23,732	4,452	1,344	5,796	2,851	552	3,403
Protective services	7,694	4,816	12,510	850	385	1,235	27	6	33
Psychology	12,694	27,117	39,811	3,044	5,364	8,408	1,492	1,416	2,908
Public affairs, services	4,635	9,203	13,838	5,938	10,107	16,045	213	218	431
Social sciences	51,172	40,289	91,461	6,400	3,980	10,380	1,933	918	2,851
Theology	4,403	1,636	6,039	2,846	1,506	4,352	1,036	104	1,140
Visual and performing arts	14,506	23,430	37,936	3,897	4,817	8,714	407	286	693
Multi/interdisciplinary studies	7,523	8,204	15,727	1,845	1,339	3,184	177	108	285
All fields	482,528	496,949	979,477	143,390	142,861	286,251	21,700	11,243	32,943

SOURCE: U.S. DEPARTMENT OF EDUCATION CENTER FOR STATISTICS

Anti-Vivisectionist Students Refuse to Harm Animals in Classes, Labs

Continued from Preceding Page

pharmacology and toxicology at the university, says some laboratory classes can be conducted only by using live animals.

"If there are no alternatives, the best thing we can do is to go on using animals," Mr. Giri says. In some courses, he says, anti-vivisectionists have been offered options, such as using tissue cultures or computer simulations.

When no options are available and a student refuses to perform assigned laboratory work, Mr. Giri says, "if that lab is one of the requirements and he won't participate, he should flunk."

Flunking is nearly what happened to two veterinary students at the University of Pennsylvania. Gloria Binkowski and Eric Dunayer refused to perform surgery on live dogs last fall and found themselves in a running battle with their professors.

Suggestions Rejected, They Say

"We didn't want to take healthy animals and do surgery on them that they didn't need," Ms. Binkowski says. "We didn't want to do anything that wasn't in the best interest of the animal."

Ms. Binkowski says she and Mr. Dunayer suggested several alternatives, including performing the operations on cadavers or on animals that were terminally ill. Their suggestions were rejected, they say, so they chose not to attend the sessions where live animals were used and were given grades of "incomplete."

"We didn't see the animals as disposable tools that we could use and then throw away," Ms. Binkowski says.

She and Mr. Dunayer say they spoke to their professors again and were offered the option of operating on dogs and killing them immediately afterwards, without making the animals recover between operations. "So instead of using two healthy animals we would kill four healthy animals," Ms. Binkowski says. "We didn't accept that alternative and we were failed for the course. A week later we filed a lawsuit."

University officials disagree with Ms. Binkowski's account. According to Donald Abt, the associate dean of veterinary medicine, Ms. Binkowski and Mr. Dunayer originally said they would operate only on animals needing each particular operation. Such animals, says Dr. Abt would be much harder for the university to obtain than a terminally ill animal dying of any natural cause. He also says the lawsuit was filed even before the students' grades were official.

The case was settled out of court. The university allowed Ms. Binkowski and Mr. Dunayer to complete the course by operating on terminally ill animals.

'Complex, Important Issue'

Dr. Abt says the students first requested animals that were going to die within days, but eventually agreed that any animal that would die within six months could be used. "It was very clear that both sides worked very hard to get a mutually acceptable compromise," he says.

The students finished the course and "did well," Dr. Abt says. "They and the faculty worked very hard and did an excellent job of finishing the course," he adds. "This is a complex issue and a very important issue in higher education."

Mike Kapis, who is earning his master's degree in zoology at San Jose State University, says animal research is not as valid, cost-effective, or expedient as other methods of study.

Mr. Kapis, founder of Alternatives to Animals, a year-old, California-based group, says it is wrong to kill to study life.

"Nothing dies on a computer," Mr. Winterfield says. "But frogs die. Rabbits die. Dogs and cats die."

Mr. Winterfield is an animal-rights convert. "I loved dissections and vivisections," he says. "I found the animal-rights people ridiculous."

Now, he says, the use of alternatives can bridge the gap between scientists and animal-rights activists. "The only way we're going to get anywhere is to work together."

Adds Nedim Buyukmihci, president of the Association of Veterinarians for Animal Rights and a professor of veterinary surgery at the University of California at Davis: "I'm hoping that curricula will change so no animal will be killed in order to teach students anything."

He says faculty attitudes are changing "very slowly with tremendous resistance and hysteria."

"Whenever students want to discuss alternatives," says Dr. Buyukmihci, "instead of discussing it intelligently, professors say, 'What do you want to do? Learn surgery on a squash?' "

'What's the Alternative?'

But Mr. Terwilliger of the medical-colleges association says that working with computers "is not the same as working in the guts and goo."

"There's no doubt about the importance of animal use in medical research," he adds. "What's the alternative? Does it mean humans should die as a result?"

Mr. Terwilliger says the association sent letters to medical colleges and teaching hospitals last spring suggesting that institutions clearly state laboratory policies to students as early in their educational careers as possible.

Some students who oppose vivisection in the classroom would prefer not to be called animal-rights activists. They say fringe groups have given the movement a bad name, and many medical and veterinary students fear they may suffer professionally if their colleagues associate them with fringe groups' activities.

"The Animal Liberation Front are jerks," says Mr. Winterfield, who is executive director of Alternatives to Animals. Because the front has been associated with releasing animals and burning buildings, it gives the whole movement a bad image, he says.

Many students believe harming animals is wrong, he says, but they are afraid they'll be labeled as activists. "They lose their jobs," he says. "They don't get into the right symposia or get the right connections and the right networking."

Mr. Francione, the Pennsylvania law professor, says the number of animal-rights activists is increasing because students are being advised that if they have conflicts they can call animal-rights groups or lawyers.

"On almost every campus there are groups of students forming," Mr. Francione says, "and those students are not only fighting the exploitation of animals on campus, but they are supporting each other."

7/22/87 C2175-1

THE CHRONICLE
of Higher Education.

July 22, 1987 • $1.95
Volume XXXIII, Number 45

ISSN 0009-5982

News Summary

Articles on inside pages

In the course of 20 years as president of Morehouse College, Hugh M. Gloster has seen its fortunes rise. Story on Page 3.

Researchers are seeking alternate sources of human tissue for use in brain grafts. Story on Page 5.

The new head of the business officers' association could have a busy year ahead of him. Story on Page 9.

Education leaders debated the merits of assessment and prepaid-tuition plans at a meeting of the Education Commission of the States. Story on Page 15.

A Congressman's attack on the tax exemption of non-profit hospitals last week dismayed higher-education officials. Story on Page 15.

More than $2.7-million intended for student loans has been placed in the operating funds of 12 states or universities, government auditors have charged. Story on Page 15.

Seminaries that have "planned giving" programs raise significantly more money than those that do not, a study has found. Story on Page 22.

Advocates of women's sports are again asking lawmakers for help in achieving equality in college athletics. Story on Page 24.

Officials of the United Nations University in Tokyo are working to increase their institution's visibility and financial base. Story on Page 25.

Ontario will establish seven research centers involving university-industry collaboration. Story on Page 25.

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Proprietary Schools' Growing Share of Pell Grant Money Means Less for College Students, Campus Officials Warn

By **ROBIN WILSON**

WASHINGTON

► Last year, for the first time, more Pell Grant money went to students at proprietary schools than to students at independent colleges and universities—$804-million compared to $785-million.

► Between 1980 and 1986, Pell Grants to proprietary-school students nearly tripled in value, while grant money to students at public four-year colleges increased by 36 per cent and money to students at private colleges increased by only 14 per cent.

► More proprietary schools are eligible for student financial assistance than are all other types of postsecondary institutions combined—3,910 versus 3,300.

Those figures, which were supplied by the U. S. Education Department and the American Council on Education, have college and university officials worried.

They say the surge in federal aid to students at proprietary schools means that students seeking bachelor's degrees at public and private, non-profit colleges are getting less aid.

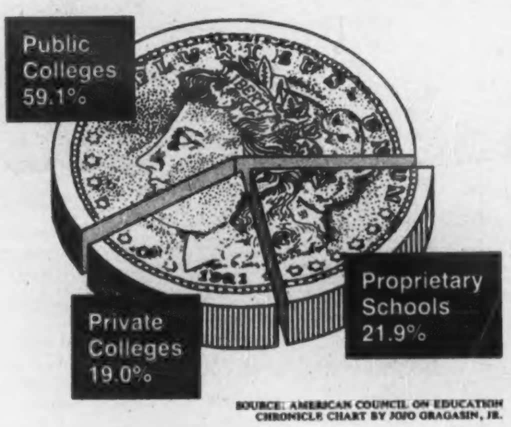
College officials are also concerned about the ease with which students can receive federal money to attend trade schools. Many believe taxpayers' money is being wasted because those students often drop out because of poor-quality training. Even so, college representatives are reluctant to anger another sector of education by pushing for tighter standards governing the eligibility of proprietary-school students for aid.

Proprietary-school representatives say charges of poor quality are exaggerated and that they are getting more Pell Grant money because they are doing a better job than colleges are of educating disadvantaged students.

Congress has shown little interest in

Continued on Page 18, Column 1

WHERE FUNDS WENT IN 1985-86



SOURCE: AMERICAN COUNCIL ON EDUCATION
CHRONICLE CHART BY JOJO GRAGASIN, JR.

N.Y. Court Says Colleges Not Required to Screen Ex-Felons Who Apply

By **CHERYL M. FIELDS**

ALBANY, N.Y.

A university has no legal duty to screen ex-convicts for violent tendencies before it admits them, the New York State Court of Appeals has ruled.

The decision by the state's highest court brought sighs of relief from college lawyers who had opposed rulings by two lower courts that held the state prison system and the State University of New York at Buffalo legally liable for a felon's rape and murder of a fellow student.

The lawyers argued that if the lower courts' decisions were allowed to stand,

Continued on Page 21, Column 1

More than Public Relations Is Needed to Repair Higher Education's Tarnished Image, Bok Says

By **PAUL DESRUISSEAUX**

BOSTON

Colleges and universities need to do more than intensify their public-relations efforts if they are to repair the tarnished image of American higher education, the president of Harvard University, Derek Bok, said here last week.

"The current challenge to higher education is not merely a challenge of public relations but a challenge of substance, and we must treat it as such," Mr. Bok told the annual meeting of the Council for Advancement and Support of Education, many of whose members are college public-relations officers and fund raisers.

Mr. Bok said recent criticism of many aspects of academe had caused the public's confidence in universities to slip.

"It is symptomatic that the nation's best-selling book bears the subtitle *How Our Universities Are Destroying Democracy and Impoverishing the Souls of To-*

Continued on Page 13, Column 1

Many Colleges Drop Classes on Computer Literacy

Many colleges and universities are dropping or drastically revising computer-literacy courses, now that students and faculty members are accustomed to working with the machines. Story on Page 9.

A College-in-Exile Trains Civil Servants for a Government that Doesn't Exist

By **STEVE ASKIN**

LUSAKA, ZAMBIA

Sam Shivute cannot forget the pain. It was a dozen years ago in his native Namibia when the police lieutenant blindfolded him, attached wires to his hands and fingers, and sent a jolt of electricity through his body.

"It threw me and shook me," he recalled not long ago. "When I tried to scream, I could not. All I could do was twitch."

Today in Zambia, although an estimated 100,000 South African troops still occupy his homeland, Mr. Shivute is getting a different kind of political education. He is studying political science and economics here at the United Nations Institute for Namibia, a kind of junior-college-in-exile for black refugees like him, and preparing to join the civil service of a government that does not yet exist.

The institute, known as UNIN, was founded in 1976—in a period when the United Nations was pressing South Africa to turn Namibia over to the Namibians, a goal that remains unfulfilled today.

Most of the institute's $5-million annual budget comes from West European nations, and its faculty comes from more than a dozen countries in Africa, Asia, Europe, and North America. United Nations officials hold eight of the 16 seats on the institute's senate, its top policymaking body, while officials of the South-West Africa People's Organization, called SWAPO, hold three senate seats and most key administrative posts.

In South Africa, Namibia is referred to as Namibia/South-West Africa. The role of SWAPO, which appears to enjoy over-

Continued on Page 27, Column 1

MARGINALIA

Headline in the Massachusetts Institute of Technology's *Tech Talk:*

SMALL NUCLEAR ATTACK WOULD
BRING ON ECONOMIC DISASTER

"Among other misfortunes," a reader observes.

▪

Among the "characteristic duties and responsibilities" of a technical editor at Southern Illinois University, according to a notice from the personnel office, is "Read prof."

▪

From *UAB Report*, a publication at the University of Alabama at Birmingham:

"Director John Thornton (Sparks Center–Dentistry) was honored by the School of Dentistry's 1987 graduating class.

"The class presented him with the 'Best Special Clinic Instructor' plague."

That's appreciation for you.

▪

News release from California State University at Northridge:

"Isaac T. Gillam IV, Assistant Administrator for Commercial Programs at the National Aeronautics and Space Administration, has been announced as the keynote speaker at the Third Annual conference, 'Computer Technology / Special Education / Rehabilitation.' . . .

"The Edwards Air Force Base site of NASA will also be at the conference."

"Big exhibit hall," a reader supposes.

▪

The competition for talent is fierce. Says an ad in the New York *Times*, for the New York Academy of Sciences: "The position is year round with four years vacation each year."

▪

Letter received by the University of Colorado at Boulder from the University of Arkansas at Little Rock:

"DEAR SIR OR MADAM OR SIR:

"I am writing to injury is you have any books available on the subject of teaching Arabic language to non-arab students. . . .

"Please do not hesitate to contact me if you have any questions."

We do have one or two.

▪

From Washington State University's *Summer Evergreen:*

"F. S. Schwarzbach has been named as the chairman of the English department, and a English professor. . . .

"Schwarzbach has taught a range of undergraduate and graduate courses from freshman composition to to drama and Western civilizations."

"His work is cut out for him," a correspondent notes. —C.G.

In Brief

Ala. Board Rejects Call to Fire Chancellor

MONTGOMERY, ALA.

The Alabama Board of Education has decided not to fire the chancellor of the state's two-year colleges, despite a controversy over false statements in the résumé he submitted to the board when he applied for the job four years ago.

Instead, the board last week asked Chancellor Charles L. Payne to submit a new résumé. Mr. Payne said he would comply with the request after meeting with the board in executive session, according to Spencer Bachus, a board member.

John Tyson, Jr., vice-president of the board, had called for Mr. Payne's resignation, but Mr. Bachus said other board members didn't feel that was warranted.

"We as a board could not reach a consensus on whether the errors were intentional or unintentional," he added. "The board unanimously agreed to ask Dr. Payne to correct any errors in his résumé and to resubmit it."

The résumé says Mr. Payne is a Vietnam veteran, although he did not actually serve in Vietnam. It also lists scholarly articles that were never published, and says that he has a doctorate in education, which he never received.

Mr. Payne did not return telephone calls last week.

Alabama Gov. Guy Hunt, who is chairman of the Board of Education, said last week he did not plan to take any action against Mr. Payne, but expressed concern that the controversy over the résumé might make it difficult for the chancellor to administer the two-year-college system.

—KATHERINE S. MANGAN

Rutgers Denied Immunity from 2 Faculty Lawsuits

A federal appeals court has ruled that Rutgers University cannot claim immunity as an arm of the state from two faculty lawsuits. The ruling cleared the way for trials in both cases.

The U.S. Court of Appeals for the Third Circuit said that although the university was created and financed by the state, it remains "an independent entity able to direct its own actions and responsible on its own for judgments resulting from those actions."

The first suit involves a faculty member who claims she was denied tenure based on "secret and undisclosed" standards. The suit, a potential class action, is sponsored by the Rutgers chapter of the American Association of University Professors.

In the second case, six faculty members charge that they were dismissed even though they had served for more than seven years. That service, they say, gave them *de facto* tenure.

Students Found to Hold Traditional Views on Sex

Although college students today have sex less often than those seven years ago, they are more satisfied with their sex lives, according to a survey of 1,200 college students.

The survey results are reported in the August issue of *Glamour* magazine.

The survey found both male and female students had more traditional views on sex, marriage, and children than those questioned in a similar survey in 1980.

Fewer men and women reported feeling pressure to be sexually active. More students of both sexes plan to marry and have children than in 1980.

Half of those polled said AIDS had affected their sex lives. Seven per cent said they knew someone with AIDS, and 25 per cent said their college health services had made no organized response to AIDS.

U. of District of Columbia to Lay Off 55 Professors

The Board of Trustees of the University of the District of Columbia has decided to lay off 55 faculty members, a move officials say will save the university $2-million next year.

Acting President Claude A. Ford said the layoffs were necessary to provide funds for the university's libraries and research and remedial programs.

Most of the layoffs—which amount to a 10-per-cent reduction in force—will be in the university's education and liberal-arts programs, where enrollments have dropped most sharply. The faculty members affected were expected to be notified this week.

None of the faculty members have tenure, although many have served beyond 10 years and have what is known at the university as "reserved interest status." According to a spokesman, the university will pay the dismissed professors a year's salary plus 10 per cent.

Leaders of the faculty union opposed the reduction in force but said they would work with the administration to seek alternatives to layoffs.

Judge Bars Camping by SUNY Protesters

Student protesters may not camp out overnight at the State University of New York at Stony Brook, a federal judge ruled last week.

The students have been protesting for nearly three months over dormitory conditions. They charge that existing dormitories are infested with cockroaches and lack proper security and hot water, said Kevin Ireland, news director. The university's $675,000 heating system has been under repair, he added.

Mr. Ireland said the university had asked that the tents be taken down each night for the protesters' safety.

Stony Brook has asked the New York Legislature for money for additional housing in each of the past seven years, but has been turned down every time, Mr. Ireland said.

Bulletin-Board Policy Ruled Unconstitutional

An Oregon State University policy requiring that items placed on campus bulletin boards be in good taste is unconstitutional, a federal judge has ruled.

U.S. District Judge Edward Leavy upheld a federal magistrate's decision that the policy violates the First Amendment right to free speech because it lacks objective criteria and permits university officials to decide subjectively what is distasteful.

The case began last year after Students for Life, an anti-abortion group, placed two posters on a bulletin board in the student union. The posters, depicting aborted fetuses, were removed by university officials after students protested their content and the fact that they were visible from an eating area.

Jo Ann Trow, the university's vice-president for student affairs, said the governing board of the student union would fashion new rules relating to the time, place, and manner in which items may be displayed on bulletin boards to satisfy the court's objection to the vagueness of the old rules.

Suit Against Columbia U. Rejected by Appeals Court

A federal appeals court has thrown out a suit by a woman seeking $10.5-million from Columbia University and sharply rebuked her in the process.

The woman, Alyza D. Lewin, had been accepted by Columbia and Princeton Universities in 1983. Rather than attend either, she decided to spend a year in Israel and asked both institutions for a year's delay. In January 1984, her father wrote Columbia that Ms. Lewin had "made other plans."

Columbia's Director of Admissions, James T. McMenamin, then wrote what he describes as "a mild letter of complaint" to Ms. Lewin, and sent copies to her high school and to Princeton, where she enrolled.

In response, Ms. Lewin and her father charged that the letter could hurt her chances of eventually becoming a lawyer, and filed the $10.5-million suit. Last month, a three-judge panel of the U.S. Court of Appeals for the Fourth Circuit refused to send the suit back to a lower court for reconsideration.

Campuses Get Sketch of Bombing Suspect

Federal authorities investigating a string of bombings around the country since 1978 have sent college and university security officers a composite sketch of a suspect in the belief he has ties to academe.

Since February, a task force of personnel from several state and federal agencies has focused its investigations in Salt Lake City, where the last of the series of bombings occurred, at a computer store.

Other incidents in Utah included the finding and defusing of a bomb in a dormitory at the University of Utah in 1981 and the mailing of three bombs from post offices at the University of Utah or Brigham Young University.

Investigators have warned faculty members at those universities to beware of suspicious packages.

Eleven people have been injured and one killed in a series of at least 12 bombings and attempted bombings in six states. Incidents have also occurred at cam-

Professional Degrees Conferred in 1984-85

	Public Institutions			Private Institutions			All Institutions		
	Men	Women	Total	Men	Women	Total	Men	Women	Total
Chiropractic	0	0	0	2,072	589	2,661	2,072	589	2,661
Dentistry	2,414	637	3,051	1,819	469	2,288	4,233	1,106	5,339
Law	8,463	5,232	13,695	14,607	9,189	23,796	23,070	14,421	37,491
Medicine	7,126	2,945	10,071	4,041	1,929	5,970	11,167	4,874	16,041
Optometry	306	150	456	506	153	659	812	303	1,115
Osteopathic medicine	322	133	455	814	220	1,034	1,136	353	1,489
Pharmacy	198	218	416	232	213	445	430	431	861
Podiatry	0	0	0	464	118	582	464	118	582
Theological professions	1	1	2	5,885	1,334	7,219	5,886	1,335	7,221
Veterinary medicine	1,037	926	1,963	98	117	215	1,135	1,043	2,178
Other	28	15	43	22	20	42	50	35	85
All fields	19,895	10,257	30,152	30,560	14,351	44,911	50,455	24,608	75,063

SOURCE: CENTER FOR EDUCATION STATISTICS

The Chronicle of Higher Education (ISSN 0009-5982) is published weekly except the last two weeks in August and the last two weeks in December, at 1255 Twenty-Third Street, N.W., Washington, D.C. 20037. Subscription rate: $50 per year ($51 if bill is to be sent). Second-class postage paid at Washington, D.C., and at additional mailing offices. Copyright © 1987 by The Chronicle of Higher Education, Inc. Printed in the United States of America. POSTMASTER: Send address changes to The Chronicle of Higher Education, P.O. Box 1955, Marion, Ohio 43305. Member, Audit Bureau of Circulations. The Chronicle reserves the right not to accept an advertiser's order. Only publication of an advertisement shall constitute final acceptance of the advertiser's order.

Proprietary Schools Get Rising Share of Pell Grants

PHOTOGRAPH FOR THE CHRONICLE BY BOB WERNER

Elizabeth Imholz, left, with client Cynthia Dias: "Students at proprietary schools are promised jobs, induced to take out grants and loans, and not provided with any of the training."

Continued from Page 1

doing anything to address the issue.

Millions of students attend for-profit trade schools each year to be trained for jobs ranging from beautician to auto mechanic—positions for which college diplomas are not required. They are eligible for roughly the same array of federal-aid programs that college students are.

Reports of students' receiving low-quality training are common.

Take Cynthia Dias. Two years ago, Ms. Dias was sure that by now she would be working as a secretary and earning enough money to support her two young daughters. But after graduating from a 15-month trade-school program, Ms. Dias still can't take shorthand or type well enough to get a secretarial job. Instead, she and her daughters live on $87 a week in welfare payments.

Ms. Dias says the classes she attended at New York's Adelphi Institute—a for-profit business school not connected with Adelphi University—didn't prepare her to be a secretary. Classes were overcrowded, she says, and typewriters and word processors were often broken.

Class-Action Lawsuit Filed

None of the $6,000 Ms. Dias paid for the training at Adelphi came out of her own pocket. Taxpayers footed the bill through the federal government's Pell Grant program and New York State's Tuition Assistance Program, both for poor students.

"Students at proprietary schools are promised jobs, induced to take out grants and loans, and not provided with any of the training," says Elizabeth M. Imholz, a New York lawyer who has filed a class-action lawsuit against Adelphi Institute on behalf of Ms. Dias and several other former students.

James M. Reynolds, a vice-president of Adelphi Institute, which operates schools across the country, says the charges leveled in the class-action suit are not true. The commission that accredits schools like the Adelphi Institute, however, recently denied accreditation to three of the school's 15 branches and is completing an emergency review of the others.

7 Accrediting Commissions

Steven J. Blair, executive director of the National Association of Trade and Technical Schools—one of three major organizations that represent proprietary schools—says only a small number of such institutions do not offer students the training they're promised. Schools are reviewed by one of seven accrediting commissions at least every five or six years, and those that do not meet the standards are effectively barred from receiving federal student aid.

Trade-school representatives say the fact that more money is flowing to students at trade schools is not cause for concern, but simply means that trade schools are doing a better job than colleges and universities of attracting disadvantaged students, who receive the bulk of federal aid. After all, the representatives say, the federal government allows students to use grants and loans at any accredited institution.

Many members of Congress say proprietary schools offer important training. They contend that stories about students' being gouged by trade schools are fabricated by college officials looking out for their own self-interest.

"These proprietary schools are providing access to poor, black students, and the rest of higher education doesn't want to or won't admit that," says William A. Blakey, an aide to Sen. Paul Simon, Democrat of Illinois.

Mr. Blakey says Congress should not meddle with students' choices of where to go to school. "The whole purpose in these student-aid programs is to let students decide what kind of program they want," he says. "That basically is none of the federal government's business."

Some members of Congress, however, are concerned that proprietary institutions are sprouting up mainly because they know they can make a profit from student aid.

"We have some quality-control concerns about proprietary schools," says Polly L. Gault, an aide to Sen. Robert T. Stafford, Republican of Vermont. "We are concerned these schools are being set up to capitalize on the student aid that's available."

Critics charge that proprietary schools admit students who they know are not academically prepared, simply to get their federal aid. In a scathing review of the state's proprietary schools last year, the Comptroller of New York State said many schools also inflate their graduation rates and use shoddy recruiting techniques.

College Presidents Concerned

College officials say the increase in Pell Grants to students at proprietary schools means less for their students. Some presidents of small liberal-arts colleges were concerned enough to meet in Washington recently to discuss the problem.

Says one, David W. Breneman, president of Kalamazoo College: "We have found that this basic, fundamental federal grant program simply is performing less and less well for our sector."

Students in proprietary schools have been eligible for federal student aid since 1972. More and more of them have received Pell Grants since then, putting severe pressure on the program, college officials say. That is because as the number of students receiving Pell Grants increases, the size of the grant given to each student cannot grow by much. (The maximum grant is expected to be $2,100 per student this fall for the third year in a row.)

As a result, poor students find it difficult to afford high-priced private colleges because their Pell Grants simply are not large enough to cover a sizable portion of their tuition, college representatives say.

Increases for Proprietary Sector

"It's harder than it was six years ago to pay for a four-year private education," says Julianne Still Thrift, senior vice-president of the National Association of Independent Colleges and Universities. "The same amount of aid is being spread over a larger number of people, and our students aren't getting any increases at all."

Charles B. Saunders, Jr., vice-president for governmental relations at the American Council on Education, says most members of Congress don't know that.

"Congress always sees us as asking for more money, and the cost of the program *is* going up, but not because students in non-profit colleges are getting more dollars," he explains. "Any increases Congress has approved for Pell Grants have pretty much gone to provide aid for students in the proprietary sector."

For all their concern, however, college lobbyists have been reluctant to push for improvements at proprietary schools and for assurances that the schools are doing a good job. Instead, they have been giving statistics on shifts in the distribution of Pell Grants to members of Congress, hoping the information will prompt lawmakers to address the issue.

Education Department Angered

The colleges' behavior has angered the Education Department. Department officials have unsuccessfully pressed Congress to prohibit proprietary schools from admitting students who lack a high-school diploma. The department says many such students receive Pell Grants to enroll in trade programs and then drop out because they were incapable of finishing the courses in the first place.

"The A.C.E. said they felt this was a problem, but no way would they help us," complains Bruce M. Carnes, Deputy Under Secretary of Education. "They've got to protect their membership."

About 25 proprietary schools are members of the council. Further, critics charge, tightening standards for admission to proprietary schools would probably have a harmful effect on some community colleges, which also admit students who lack high-school diplomas.

"The department talked with us about whether we were concerned and we said Yes," Mr. Saunders says. "But one thing we're not going to do is go to war with other sectors of education."

Congressional Action Unlikely

Observers say there are several reasons Congress is unlikely to turn its attention to problems at proprietary schools anytime soon.

First, the schools have experienced lobbyists who are frequently on Capitol Hill to fend off criticism and help lawmakers devise changes in legislation that trade schools favor. Among the lobbyists are William C. Clohan and John E. Dean, both of whom worked for many years for members of the House Education and Labor Committee.

Second, trade-school groups have made financial contributions to Congressional campaigns. A political action committee established by the Association of Independent Colleges and Schools gave $56,350 to lawmakers during the 1985-86 sessions of Congress, and the National Association of Accredited Cosmetology Schools PAC gave $800. The third major trade-school group, the National Association of Trade and Technical Schools, established its PAC only this year, and hence gave no money during the 1985-86 sessions of Congress. Dozens of individuals who own or operate proprietary schools also gave money to lawmakers on their own.

In contrast, the major higher-education associations have not had political action committees, although a community-college PAC was recently set up. Critics say the money influences how members of Congress vote.

For example, when lawmakers were writing legislation to extend the Higher Education Act last year, they said they wanted to address the complaint that some proprietary institutions waste financial aid by admitting students who are not academically prepared. But the standard they devised continues to give institutions great leeway in admitting students who lack high-school diplomas.

In addition, Congress agreed last year to allow students with jobs on proprietary-school campuses to receive money from the College Work-Study program. In effect, say college representatives, that means the government is paying for work done at profit-making companies.

Even so, some members of Congress say proprietary schools did not get everything they wanted last year. School representatives wanted lawmakers to approve large increases in how much students could borrow in their first two years of postsecondary education. Most proprietary-school programs take one to two years to complete, and school representatives wanted their students to be eligible for more aid. But Congress held down the amount because studies show that students who attend only one or two years of college are more likely to default than those who attend longer.

Effects of Donations Disputed

Proprietary-school representatives dispute that their donations have had any effect on legislators.

"You do not buy a Congressman," says Jerry W. Miller, president of the Association of Independent Colleges and Schools. "Having a PAC is an orderly, systematic, above-board way of supporting members of Congress who support higher education in general."

According to records filed with the Federal Elections Commission, the following lawmakers are among those who received the most money during 1985-86 from proprietary-school PACs, lobbyists who represent proprietary schools, and owners and employees of the schools: Rep. William D. Ford, the Michigan Democrat who used to chair the postsecondary-education subcommittee, $26,300; Rep. Mario Biaggi, Democrat of New York and a member of the Education and Labor Committee, $15,950; Senator Simon, a member of the Labor and Human Resources Committee, $7,050; and Sen. Dan Quayle, Republican of Indiana and a member of the Labor and Human Resources Committee, $7,400.

The last Congressional inquiry into problems at proprietary schools was in 1984, when the General Accounting Office issued a critical review of schools' use of student aid. Proprietary-school representatives blasted the report, contending that it was full of errors. Aides to many lawmakers say the rebuttal convinced their bosses that most proprietary schools are doing a good job.

'Not the Federal Role'

House aides say there is no plan to address problems at proprietary schools.

"Congress decided a long time ago it was not the federal role to get into monitoring the quality of education programs," says Thomas R. Wolanin, an aide to Representative Ford. That is the job of accrediting commissions, Mr. Wolanin says.

An aide to Sen. Claiborne Pell, the Rhode Island Democrat who chairs the Senate education subcommittee, says the panel does plan to look at the quality of higher education in general, but probably not until next year.

Ms. Dias, meanwhile, is hoping to pass the General Educational Development test this summer and enroll in one of several community colleges near her home in the fall. She says she still wonders how she could have received such training when the federal government was helping to pay for it.

"I'm on public assistance and I figured the best thing for me was to go back to school for my family, so I could get out into the business world and take a good job," she says. "I figured the government had invested this money for me to go to school and I did not want that money to be wasted. But I am very disgusted with the way this turned out."

7/28/87 C2175-1

THE CHRONICLE

of Higher Education.

ISSN 0009-5982

July 29, 1987 • $1.95
Volume XXXIII, Number 46

News Summary

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The Naropa Institute, possibly the only accredited Buddhism-based college in America, is home to an unusual summer writing program. Story on Page 3.

Efforts by universities to help faculty members transfer the results of their research to the marketplace present ethical dilemmas for institutions and scholars. Story on Page 11.

A finance professor at the University of Bridgeport has sued to halt the reorganization of the university's business college. Story on Page 13.

A new state budget in Texas provides higher education with a 9.1-per-cent increase that is still far short of what college officials wanted. Story on Page 15.

Leaders of black colleges have charged that proposed federal rules would unfairly deny support to some black institutions. Story on Page 15.

Governors should make more use of their states' public-university systems to promote economic growth, says a new report. Story on Page 19.

Illinois universities will lose hundreds of faculty and staff positions this fall due to cuts in state appropriations. Story on Page 19.

"Star" fund raisers received higher pay last year, while average salaries in the field were down, a survey has found. Story on Page 21.

The influx of women into fund raising has had a marked effect on the field. Story on Page 22.

U.S. archaeologists abandoned an excavation in Israel after protesters said the researchers were desecrating a cemetery. Story on Page 24.

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Construction Boom Seen on Campuses over Next 5 Years

'Hidden crisis' likely to mean new buildings and renovations

By JEAN EVANGELAUF

WASHINGTON

Campus construction will boom over the next five years as colleges and universities catch up on deferred maintenance and replace outdated classrooms and laboratories.

A survey of college planners that was released last week found that about 60 per cent saw the need for new or modernized facilities on their campuses as "extremely urgent" or "very urgent." Asked to list the most severe problems of their campus buildings, the planners ranked roofs, heating systems, asbestos removal, and electrical systems as their top concerns.

End of Facilities' Life Cycles

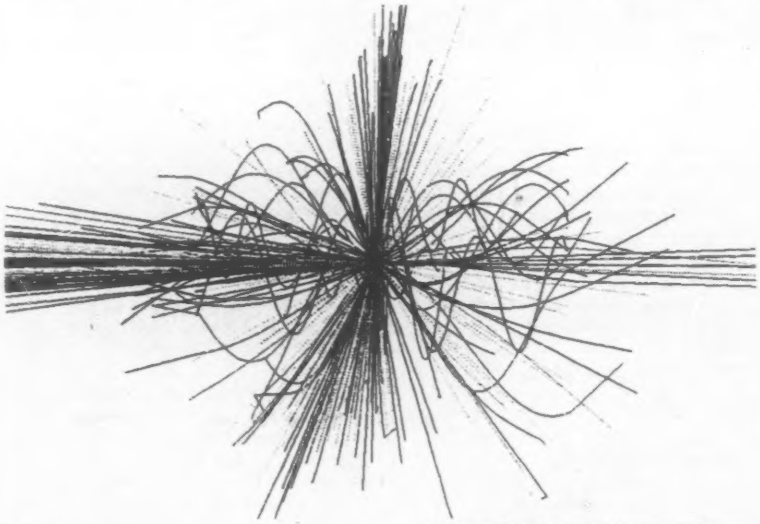
"What we have here is a hidden crisis," said David Paul Helpern, an architect and author of the survey report. "You may need to be an expert to know a building is in poor shape," he said here at the annual meeting of the Society for College and University Planning, which sponsored the survey with Mr. Helpern.

The cause of the crisis, he explained, "is that we have old buildings getting worse and we have new buildings getting worse." The facilities built during the rapid expansion of higher education in the 1960's are approaching the end of their 25-year life cycle, he said, and the older, better-constructed buildings of a century ago are also wearing out.

In addition, he said, colleges and universities will need to renovate buildings to accommodate new technologies, such as computers, and provide amenities such as parking and athletic facilities to attract stu-

Continued on Page 20, Column 1

OBJECTIVE AT CERN: TO RE-CREATE CREATION



A COMPUTER SIMULATION OF A PARTICLE COLLISION; FERMI NATIONAL ACCELERATOR LABORATORY

During the first moments of the big bang, when the universe was but a speck, all of the fundamental forces were unified. One trillion-trillion-trillionth of a second later, as the universe expanded to about one-tenth of a millimeter across and cooled, symmetry broke. Like a drop of water that is suddenly frozen and crystallized into asymmetrical fractures, the breaking of symmetry separated the fundamental forces from one another. . . .

Scientists at CERN, the European physics research center in Geneva, are working on a giant accelerator that they hope will mimic those moments. Story on Page 4.

Against Towering Odds, Latin American Countries Combat Problems of Illiteracy

BOGOTÁ, COLOMBIA

The countries of Latin America have 6 million university students, 450,000 professors, and 45 million illiterates, a United Nations official told an international conference of educators and economists here a few months ago.

It is, he said, "like a skyscraper towering over a landscape filled with rural shacks."

Even that is an improvement, the official might have added. In 1970, Latin America's illiteracy rate stood at 27.3 per cent; now it is down to 13.4 per cent. But unless the region does much more to confront the problem soon, by the year 2000 it could still have nearly 40 million people who can neither read nor write.

The odds against success are great. Widespread poverty, malnutrition, uneducated and often non-Spanish-speaking rural populations, declining school-attendance rates, economic crises from one Latin American nation to the next—all make the effort to combat illiteracy a tremendous challenge.

Foreign Debts Hold Down Spending

Foreign debts, in particular, have forced many governments to hold down their spending on education—which amounts to only 4 per cent of the gross national products of the countries in the region.

Sweeping Changes Proposed for Cal. Higher Education

A state commission has suggested broad changes for California's higher-education system. If adopted, the plan could have a nationwide impact. Page 15.

But in country after country, officials have come to recognize that creative approaches to combating illiteracy are crucial to their people's future, and the battle has been joined.

"The problem of illiteracy is not exclusively one of resources," says Fernando Cardenal, Nicaragua's Minister of Education. "When the government makes a political decision to give priority to education—when the people participate and assume the task of educating others—much can be done with very little money."

In Nicaragua thousands of young people have been trained to teach reading and writing, and the Sandinista government says it has reduced illiteracy rates from 63 per cent in 1979 to 15 per cent today.

In Brazil, where one-fifth of the people are illiterate, grassroots programs in peasant communities also are under way. Peru

Continued on Page 24, Column 1

FACT-FILE

1985-86 Holdings of Research Libraries in U.S. and Canada

University libraries

	Rank[1]	Volumes in library	Volumes added	Current serials	Total staff	Total expenditures[2]
Harvard U.	1	11,136,062	217,757	102,000	1,044	$30,988,429
U. of California at Los Angeles	2	5,486,955	296,309	88,545	695	27,529,037
U. of California at Berkeley	3	6,845,732	254,231	97,971	750	25,114,849
Yale U.	4	8,236,679	174,739	57,351	636	19,850,398
U. of Illinois	5	7,000,170	198,837	92,913	556	15,428,361
U. of Texas	6	5,579,326	186,961	78,189	585	17,315,732
U. of Toronto	7	5,373,654	206,766	40,238	735	18,053,344
Stanford U.[3]	8	5,447,869	154,742	46,431	584	23,608,856
Columbia U.	9	5,551,739	121,669	63,430	597	18,031,190
Cornell U.[3]	10	4,870,570	129,755	58,504	552	16,464,418
U. of Washington	11	4,549,114	154,118	55,096	484	12,655,741
U. of Wisconsin	12	4,607,542	121,862	48,907	511	15,784,676
U. of Minnesota	13	4,286,431	116,479	44,559	417	14,956,701
U. of Chicago	14	4,756,076	101,139	47,685	357	12,605,029
U. of North Carolina	15	3,301,751	120,512	44,513	408	12,648,539
Ohio State U.	16	4,077,575	110,862	31,312	469	13,811,159
Princeton U.	17	3,856,638	107,393	36,290	379	12,390,223
Pennsylvania State U.[3]	18	2,808,553	91,180	29,161	457	14,820,213
U. of Pennsylvania	19	3,376,901	106,152	30,511	373	12,468,646
Duke U.	20	3,510,645	92,093	35,969	317	11,073,951
U. of Arizona	21	3,139,481	102,612	31,892	365	11,228,817
U. of California at Davis	22	2,082,128	92,477	50,564	316	12,177,242
U. of Georgia[3]	23	2,510,730	95,057	53,553	354	9,597,769
U. of British Columbia	24	2,555,667	97,837	23,521	425	11,076,600
U. of Virginia	25	2,812,167	110,519	22,318	344	11,873,220
New York U.	26	2,932,055	74,656	29,789	358	12,801,816
Arizona State U.[3]	27	2,108,370	116,615	34,648	326	10,608,833
U. of Alberta[3]	28	2,555,756	92,345	22,608	402	10,814,712
Northwestern U.	29	3,206,698	97,577	25,317	343	10,674,464
Rutgers U.[3]	30	2,300,292	86,082	18,694	465	14,443,513
U. of Southern California[3]	31	2,497,463	68,058	31,463	377	10,479,608
U. of Iowa	32	2,754,851	99,184	37,297	259	8,668,791
U. of Florida	32	2,539,417	78,902	29,512	386	9,875,490
Michigan State U.	34	3,129,802	81,521	24,859	325	9,723,470
U. of Kansas	35	2,571,998	87,045	29,666	294	9,283,467
Johns Hopkins U.	36	2,621,732	70,111	20,024	358	10,224,559
U. of California at San Diego	37	1,760,614	85,407	19,475	300	11,336,121
U. of Maryland	38	1,780,055	87,563	20,658	318	9,932,703
Massachusetts Institute of Technology	39	2,029,455	81,855	21,147	280	8,719,174
McGill U.	40	2,347,242	60,543	18,013	323	9,279,089
Howard U.	41	1,541,337	70,499	24,966	265	10,656,085
U. of Hawaii	42	2,089,176	77,913	33,869	223	6,420,637
Louisiana State U.	43	2,210,758	65,291	22,840	272	8,006,843
Boston U.	44	1,648,586	56,764	29,129	299	8,361,092
U. of Missouri	45	2,318,012	68,908	16,880	246	8,602,188
Syracuse U.	46	2,158,536	55,733	23,027	243	7,789,985
U. of Western Ontario	47	1,868,915	61,973	18,972	310	7,130,876
Wayne State U.[3]	48	2,129,392	54,781	23,336	231	6,682,030
Emory U.	49	1,951,101	66,931	17,969	230	8,340,072
U. of California at Santa Barbara	50	1,745,803	49,381	21,247	239	9,763,294
Georgetown U.	51	1,553,057	65,104	20,485	273	9,161,123
U. of Connecticut	52	2,013,043	68,312	19,872	225	7,874,952
U. of Cincinnati	53	1,527,605	61,434	19,652	283	8,771,800
Texas A&M U.	54	1,655,652	59,997	16,772	298	8,851,483
Vanderbilt U.	55	1,679,141	70,991	17,800	237	7,597,039
U. of Laval	56	1,541,660	55,538	13,722	269	7,991,511
U. of South Carolina	57	2,175,766	65,942	18,896	204	5,788,807
U. of New Mexico	58	1,560,054	53,197	17,105	262	7,750,244
U. of Nebraska	58	1,833,558	62,772	23,755	207	5,941,275
Southern Illinois U.	60	1,899,589	59,445	21,473	246	6,785,656
Washington U. (Mo.)	60	2,069,700	43,333	16,454	231	8,103,626
U. of Massachusetts	62	2,129,588	67,077	14,138	213	6,782,429
Temple U.[3]	63	1,896,630	59,284	15,839	259	6,782,747
Purdue U.	64	1,695,718	50,815	18,224	264	6,602,987
U. of Miami	64	1,552,907	52,707	21,565	243	$6,875,415
Brown U.	64	2,015,469	50,686	15,559	229	7,497,384
Brigham Young U.	67	1,802,197	65,266	17,222	298	7,776,465
Virginia Polytechnic Institute and State U.[3]	68	1,551,733	64,744	19,814	193	6,553,355
U. of Kentucky	69	1,992,499	44,363	15,072	261	7,395,619
Iowa State U.	70	1,663,235	63,139	19,683	211	6,074,302
U. of Waterloo[3]	71	1,466,524	66,120	16,281	220	5,978,829
U. of Oklahoma	72	2,492,364	60,838	17,370	183	5,805,954
U. of Rochester[3]	73	2,512,828	48,246	12,857	240	6,601,583
U. of Delaware	73	1,723,465	54,569	20,590	177	6,631,625
U. of Houston	75	1,485,706	52,513	22,581	222	6,757,350
U. of California at Irvine	76	1,239,130	61,017	15,904	211	9,069,029
U. of Colorado	77	2,096,954	50,783	13,803	203	6,575,349
U. of Notre Dame	77	1,745,405	62,951	16,162	177	5,638,794
York U. (Ontario)[3]	79	1,483,382	53,654	11,933	236	6,774,073
State U. of New York at Stony Brook	80	1,552,497	49,996	13,117	218	6,777,927
U. of Utah	80	1,588,466	56,818	14,348	226	5,810,603
Tulane U.[3]	80	1,630,587	56,836	14,716	188	5,808,536
Florida State U.[3]	80	1,624,138	47,477	17,233	230	5,951,851
U. of Manitoba	84	1,403,940	45,227	12,433	235	6,486,406
Washington State U.	85	1,456,181	39,594	20,181	209	6,535,747
U. of Oregon	85	1,706,612	46,737	18,268	200	5,825,800
U. of Tennessee	87	1,552,605	41,623	14,456	230	5,785,671
North Carolina State U.	88	1,153,720	47,280	15,439	213	7,215,356
Queen's U. at Kingston	88	1,632,468	35,891	15,562	216	5,604,165
Dartmouth C.	90	1,614,015	37,141	20,155	182	5,693,262
Georgia Institute of Technology	91	1,468,638	49,685	28,557	111	4,308,387
U. of Guelph	92	1,634,610	69,924	10,047	157	4,316,590
McMaster U.	92	1,218,070	47,509	10,240	193	6,069,787
U. of Alabama	94	1,654,865	43,712	15,760	170	5,089,297
U. of California at Riverside	95	1,250,372	47,239	13,666	146	6,303,190
Case Western Reserve U.	96	1,493,579	29,359	13,394	180	6,265,454
U. of Saskatchewan	97	1,253,984	47,900	10,118	171	5,241,180
State U. of New York at Albany[3]	98	1,154,576	36,853	13,300	156	5,389,261
Kent State U.	99	1,609,598	39,661	7,375	184	5,623,444
Oklahoma State U.	100	1,420,618	30,313	10,350	167	4,699,819
Colorado State U.	101	1,071,104	31,814	11,761	141	4,214,993
Indiana U.	n/a	3,786,962	118,254	32,586	509	11,906,464
U. of Michigan	n/a	5,920,576	145,349	66,106	576	17,526,414
U. of Pittsburgh	n/a	2,661,196	85,417	26,328	333	8,893,988
Rice U.	n/a	1,276,197	43,240	11,586	144	4,540,456
State U. of New York at Buffalo	n/a	2,371,181	66,169	23,703	272	8,752,551

Note: Institutions are asked to report figures for their main campuses only, unless a branch campus is indicated.

[1] Based on an index developed by the Association of Research Libraries to measure the relative size of university libraries. The index takes into account the number of volumes held, number of volumes added, number of current serials, total expenditures, and size of staff. Five institutions chose not to have their index figure calculated; they appear at the end of the list of university libraries.

[2] Figures for Canadian libraries are expressed in U.S. dollars.

[3] Includes branches as well as the main institution.

n/a Data not available.

Non-university libraries

	Volumes in library	Volumes added	Current serials	Total staff	Total expenditures[2]
Boston Public Library	5,568,006	187,776	15,738	557	$8,454,137
Canada Institute for Scientific and Technical Information, Ottawa, Ontario[3]	1,983,464	72,723	30,000	230	15,715,642
Center for Research Libraries, Chicago	2,830,472	35,514	14,888	67	2,697,172
Library of Congress, Washingon	20,677,803	302,077	175,000	4,824	247,797,724
Linda Hall Library, Kansas City, Mo.	584,950	17,000	13,100	63	2,460,863
National Agricultural Library, Beltsville, Md.	1,860,103	14,176	31,000	197	12,053,077
National Library of Canada, Ottawa, Ontario	1,080,916	50,494	20,766	549	22,742,036
National Library of Medicine, Bethesda, Md.	1,782,238	39,425	27,410	401	27,795,198
Newberry Library, Chicago	1,402,554	10,870	6,200	106	2,829,337
New York Public Library, New York	6,203,240	453,574	140,000	494	32,052,857
New York State Library, Albany, N.Y.	1,978,860	35,613	17,770	192	7,058,627
Smithsonian Institution, Washington[3]	1,000,621	21,321	15,941	119	4,507,536

SOURCE: ASSOCIATION OF RESEARCH LIBRARIES

New Scholarly Books

Continued from Page 8

thought at a time when he was still greatly influenced by Martin Heidegger.

The Language of Difference, by Charles E. Scott (Humanities Press International; 204 pages; $35). A study of Nietzsche and Heidegger.

Martin Heidegger's Path of Thinking, by Otto Poggeler, translated by Dan Magurshak and Sigmund Barber (Humanities Press International; 324 pages; $45). This first English translation is based on the 1983 second edition of the German scholar's 1963 work.

Psychosemantics: The Problem of Meaning in the Philosophy of Mind, by Jerry A. Fodor (MIT Press; 224 pages; $19.95).

William Ockham, by Marilyn McCord Adams (University of Notre Dame Press; the two-volume set has 1,216 pages and costs $90). Analyzes the theories of the English Scholastic philosopher who lived from about 1285 to about 1349.

POLITICAL SCIENCE

The Politics of Environmental Mediation, by Douglas J. Amy (Columbia University Press; 288 pages; $30). Discusses the politics of using mediation as a means of resolving disputes over environmental issues.

Teledemocracy: Can Technology Protect Democracy? by F. Christopher Arterton (Sage Publications; 280 pages; $29.95 hardcover, $14.95 paperback). Examines the effects of cable television and other new telecommunications technologies on democratic political institutions.

Thinking Like a Communist: State and Legitimacy in the Soviet Union, China, and Cuba, by Tony Smith (W. W. Norton & Company; 244 pages; $16.95). Argues that Marx's concept of the dictatorship of the proletariat was transformed by Lenin into the dictatorship of the Communist Party; suggests how such party domination has limited economic and political change in China, Cuba, and the Soviet Union.

Wars Without Splendor: The U.S. Military and Low-Level Conflict, by Ernest Evans (Greenwood Press; 176 pages; $27.95). Discusses the role of "low-intensity" military operations in American foreign policy.

RELIGION

Behind the Essenes: History and Ideology in the Dead Sea Scrolls, by Philip R. Davies (Scholars Press; 150 pages $24.95).

Composition and Tradition in the Book of Hosea: A Redaction-Critical Investigation, by Gale A. Yee (Scholars Press; 440 pages; $18.95 hardcover, $13.95 paperback). Discusses the problem of literary unity in the Old Testament Book of Hosea.

The Disposal of Impurity, by David Pearson Wright (Scholars Press; 400 pages; $17.95 hardcover, $12.95 paperback). Examines Israelite rituals of purification as detailed in the Old Testament's Priestly writings.

Narrative and Morality: A Theological Inquiry, by Paul Nelson (Pennsylvania State University Press; 192 pages; $21.50).

Paul and the Irony of Affliction, by Karl A. Plank (Scholars Press; 150 pages; $15.95 hardcover, $11.95 paperback). Discusses Paul's rhetoric of affliction in I Corinthians 4:9-13.

Paul, the Worldly Ascetic: Response to the World and Self-Understanding According to I Corinthians 7, by Vincent L. Wimbush (Mercer University Press; 122 pages; $18.95). Describes the model of Christian behavior presented in I Corinthians 7:29-35.

Science Serving Faith: Henry Nelson Wieman, edited by Creighton Peden and Charles Willig (Scholars Press; 200 pages; $19.95 hardcover, $14.95 paperback). Edition of an unfinished work on Christology by the American theologian who died in 1975.

Theism, Atheism, and the Doctrine of the Trinity, by W. Waite Willis, Jr. (Scholars Press; 200 pages; $15.95 hardcover, $11.95 paperback).

Who Wrote the Bible? by Richard Elliott Friedman (Summit Books; 299 pages; $18.95). Draws on recent archaeological discoveries and new forms of linguistic analysis in a contribution to the scholarly debate over biblical authorship.

Young Man Shinran: A Reappraisal of Shinran's Life, by Takamichi Takahatake (Wilfrid Laurier University Press, distributed by Humanities Press International; 228 pages; $17.50). The Japanese Buddhist philosopher Shinran lived from 1173 to 1262.

SOCIOLOGY

Comparative Studies of Social Structure: Recent Research on France, the United States, and the Federal Republic of Germany, edited by Wolfgang Teckenberg (M. E. Sharpe, Inc.; 215 pages; $35). Contains original essays on social stratification.

THEATER

Ellen Terry: Player in Her Time, by Nina Auerbach (W. W. Norton & Company; 504 pages; $22.50). A biography of the English actress who lived from 1847 to 1928.

URBAN STUDIES

The Decline of Urban Politics: Political Theory and the Crisis of the Local State, by M. Gottdiener (Sage Publications; 344 pages; $29.95 hardcover, $14.95 paperback).

Construction Boom Seen on Campuses over 5 Years

Continued from Page 1

dents. "It all adds up to a building boom on the campuses," Mr. Helpern said.

Virtually all of those surveyed said their institutions would undertake major construction or renovation projects in the next five years. The following table shows how much colleges and universities plan to spend on those projects:

Estimated building costs within the next five years	
Rehabilitation and alteration:	
Under $10-million	64%
$10- to $25-million	21%
$25- to $50-million	9%
$50- to $100-million	4%
Over $100-million	1%
New construction:	
Under $10-million	32%
$10- to $25-million	35%
$25- to $50-million	18%
$50- to $100-million	8%
Over $100-million	7%

Even though colleges plan to spend many millions on facilities, the total may not be adequate, the survey results suggest. The following table shows how much money the planners estimate their colleges will require to put existing buildings into good condition, and how much they will need to spend on physical facilities to meet the needs of current educational programs:

Estimated construction costs	
To put all college buildings in good condition:	
Under $10-million	50%
$10- to $25-million	28%
$25- to $50-million	13%
$50- to $100-million	6%
Over $100-million	3%
To meet all needs of college's current educational program:	
Under $10-million	25%
$10- to $25-million	25%
$25- to $50-million	15%
$50- to $100-million	18%
Over $100-million	17%

The top priorities of campus facilities managers are classrooms and laboratories. Nearly half of those polled are planning new classroom construction, and 34 per cent will renovate classrooms.

'Embarrassing' Conditions

"Classrooms have gotten short shrift," Mr. Helpern said. "There's the sense that you can hold a class anywhere."

Some 44 per cent of the colleges surveyed will build new laboratories, and 33 per cent will renovate existing research facilities.

"Embarrassing" was Mr. Helpern's description of the working conditions of faculty members. "I've seen six professors working in a basement lab that was dank and damp," he said. "It's not a place you'd put anyone unless you were a college or a university."

DOUGLAS GORALSKI

Architect David Paul Helpern: "Classrooms have gotten short shrift. There's the sense that you can hold a class anywhere."

In a shift from the last five years, colleges will be undertaking more new construction and less renovation of existing buildings, a trend Mr. Helpern said reflects the limits of rehabilitation.

Low Figures in 2 Categories

The planners said their top problems over the next five years would be obtaining money for renovation and capital improvements and garnering public support for spending on college facilities.

The survey results indicate that two normally costly projects—renovating historic buildings and removing asbestos—will be less expensive than anticipated. The median for those activities was $1-million, a figure Mr. Helpern said appeared low.

The survey results are based on reports from 213 institutions, or 40 per cent of the 533 U.S. institutions that belong to the college planning society.

Copies of the 12-page report, *The State of College and University Facilities*, are available for $5 prepaid from David Paul Helpern, P.C., Architecture and Planning, 9 East 41st Street, New York 10017, or from the Society for College and University Planning, 2026M School of Education Building, University of Michigan, Ann Arbor, Mich. 48109.

Proportion of Colleges Reporting Major Construction Projects

	Rehabilitation and alteration		New construction	
	Past 5 years	Next 5 years	Past 5 years	Next 5 years
University housing:				
Undergraduate	39%	26%	16%	25%
Graduate	6%	9%	2%	6%
Faculty	1%	1%	0%	2%
Married student	7%	8%	1%	8%
Classroom	59%	34%	23%	49%
Auditorium	22%	21%	8%	20%
Office	55%	24%	17%	38%
Library	20%	34%	10%	29%
Laboratory	37%	33%	19%	44%
Athletics, recreation	25%	17%	17%	36%
Performing arts	17%	13%	5%	24%
Student center	24%	19%	5%	25%
Dining	23%	15%	4%	13%
Parking	12%	12%	9%	31%
Infrastructure	24%	28%	11%	25%
Other	1%	1%	2%	5%

SOURCE: SOCIETY FOR COLLEGE AND UNIVERSITY PLANNING

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Give & Take

The sneakers worn by the two Miami *Herald* reporters who staked out Gary Hart's Washington home will be auctioned next month to help support training for minority journalists in mid-career.

One of the reporters, Tom Fiedler, said the shoes had helped him pose as a jogger during the stakeout. "I did these very slow little loops around the neighborhood and would sit in the park and watch the town house," he said. "I looked like any typical Capitol Hill yuppie."

Proceeds from the auction, to be held at the annual meeting of the National Association of Black Journalists, will finance scholarships for the Multicultural Management Program in the School of Journalism at the University of Missouri at Columbia.

The reporters donated their shoes in response to a request from Ben Johnson, the program's director, who wrote to hundreds of journalists seeking items to auction.

Mr. Fiedler's shoes are size 10 Nikes, dark gray and silver, with a retail value of $49.95.

▪

Paul Simon, the singer, will donate to the United Negro College Fund a portion of the revenues from an eight-city concert tour promoting his *Graceland* album.

William Allen, the fund's vice-president and general counsel, said his organization had sent letters promoting the concert to donors and alumni of colleges benefiting from the fund, and had worked through the black media to help generate interest in the concerts among blacks. "The black community didn't know fully what these concerts were about," he said. Many blacks had criticized the album because portions of it were recorded in South Africa, in violation of a cultural boycott of that country. Simon is also contributing revenues from the tour to Children Against Apartheid, a group headed by Archbishop Desmond M. Tutu. The tour concludes this month.

▪

The paintings held in collections at over 100 historically black colleges and universities have been inventoried as a result of fund-raising efforts by the President's Committee on the Arts and Humanities. The committee is now seeking sponsors for an exhibit of the paintings and for a program to train professionals at the colleges in museum-conservation techniques.

▪

James Farmer, the founder of the Congress of Racial Equality (CORE), has given the University of Texas at Austin thousands of papers pertaining to the civil-rights movement from the early 1940's to the 1970's.

The collection includes papers relating to Mr. Farmer's role in organizing the Freedom Riders, an interracial group that helped desegregate Southern bus systems, and in advising Presidents Johnson and Nixon on civil rights.

PHILANTHROPY

Pay Gap Widens Among Fund Raisers as Colleges Pursue High-Priced 'Stars'

Top salaries rose sharply in 1986 while averages fell; disparity called 'just enormous'

By PAUL DESRUISSEAUX

BOSTON

Colleges and universities are continuing to pursue high-priced "stars" to head their fund-raising operations and to offer them substantially higher salaries than those paid to other officials on their development staffs, according to a consultant who has just completed a study of compensation in the field.

"At many institutions we are now seeing a gap between the salaries paid to the chief development officer and to the next highest-ranking fund raiser that is just enormous," said Steven T. Ast, president of the executive recruiting division of Brakeley, John Price Jones Inc., a fund-raising consulting company.

The highest salaries paid last year to fund raisers at both public and private institutions were up sharply from the 1985 levels, according to Mr. Ast's study. At the same time, the average salary paid to head fund raisers in higher education in 1986 was found to be $5,245 lower than in the year before. Average salaries were also down in four of the five categories of mid-level fund-raising officials.

Responses from 273 Campuses

The findings are based on the responses of head fund raisers at 273 colleges and universities to a survey conducted by Brakeley Recruiting. In addition to information on their own career histories and salaries, these "chief development officers," as the survey called them, also provided data on the compensation of a total of 729 members of their staffs responsible for particular aspects of the overall fund-raising operation, such as planned giving or major gifts.

Officials of colleges and universities of all sizes, both public and private, in all parts of the country participated in the survey. "We're very confident that the findings are a fair reflection of what's going on out there," said Mr. Ast. The survey was sent only to institutions that had what he called "serious fund-raising programs," determined by the size of the staff and the amount it raised in private support each year, as well as the number of years the program had been in place.

Top Salary: $130,000

While a report on the survey will not be published until fall, Mr. Ast discussed some of its findings at the annual meeting here of the Council for Advancement and Support of Education. Among them:

► The highest salary paid in 1986 to a fund raiser at a private college or university in the survey group was $130,000, up from $115,000 in 1985. At public universities, the top figure was $114,000, compared to $99,750 the year before.

► Forty-six per cent of the chief development officers in the survey were paid between $60,000 and $100,000, and 2.9 per cent of them earned more than $100,000.

► The average salary received by chief development officers was $59,712. Those at public universities earned an average of $62,500, about $4,500 more than the average salary of those at private institutions. The lowest salary reported was $22,500.

► Women held 17.4 per cent of the top fund-raising positions, and on the average earned only 82 cents for every dollar paid to their male counterparts.

The survey also found that 65 per cent of all of the chief development officers responding had an advanced degree, and 26 per cent of the total had doctorates. Those with a Ph.D. had an average salary that was $3,106 more than the average for the group as a whole.

The best-paid fund raisers, said Mr. Ast, were those who had raised the most money, had been in their positions the longest, and supervised the largest staffs.

Average salaries of fund raisers in higher education

	1985	1986
Chief development officers	$64,957	$59,712
Director of development	48,160	45,934
Director of major gifts	43,610	39,903
Director of annual giving	34,510	30,829
Director of corporate or foundation giving	34,540	34,628
Director of planned giving	41,370	40,881

The survey found that an institution's size—based on endowment, enrollment, and operating budget—had a lot to do with the level of compensation of its fund raisers. Mr. Ast said chief development officers at private institutions with operating budgets of approximately $50-million earned average salaries that were $45,000 lower than those earned by their counterparts at institutions with budgets of $200-million.

Mr. Ast said the drop last year in the average salaries earned by fund raisers had been due to a "market correction."

"There was a real explosion in the salaries paid to fund raisers a few years ago," he said, "and now some institutions are deciding that they went too far too fast and are no longer willing to pay those high salaries."

Women Earn Less

He also said the large number of women who entered the field in recent years had brought average salaries down. (See story on following page.) On that point, however, other members of the panel of which Mr. Ast was a part—the title of which was "Men and Women in Development"—said the increase in female fund raisers had had little to do with lowering salaries in the field.

"We can't let this become a men-versus-women issue," said Mr. Ast in an interview, "but our survey's findings show that women are now competing with men for top jobs in fund raising, and they are earning lower salaries. I have nothing that shows women are willing to accept lower salaries than men for the same jobs, but, based on anecdotal evidence, I'd say that that is the current perception of many men in fund raising."

If there are many more women in fund raising today than in the past, most of them are at lower-level positions, according to Mr. Ast's survey. It found only 12 per cent of the mid-level managers were women. Mr. Ast said the Brakeley survey would collect information in future years that could be used to determine how many fund raising positions at all levels were held by women.

Expectations Raised

Mr. Ast said the ever-widening gap between the best-paid fund raisers and the rest of the field was a cause for serious concern.

"The star system seems to raise the expectations of trustees and presidents, who

Continued on Following Page

Popular Type of Charitable Trust Imperiled by a Proposed Technical Change in Tax Law

WASHINGTON

A technical amendment to the Tax Reform Act of 1986 will, if enacted, discourage the creation of many charitable lead trusts, fund raisers say.

One of several types of planned gifts—those that enable donors to make contributions to charity while retaining some financial benefits from them—charitable lead trusts are popular among donors to colleges and universities. To make such a contribution, a donor typically places funds in a trust for a specified number of years, during which payments from the funds go to the college or other charity. When the trust ends, the assets go to the donor's grandchildren.

The technical amendment now before Congress would eliminate the charitable deduction from "generation-skipping" transfer taxes on lead trusts that were created after June 10, 1987.

"This is a substantive change masquerading as a technical amendment," said Conrad Teitell, a tax lawyer and fund-raising consultant. He called the change "bad policy."

'Very Likely' to Become Law

The amendment is just one of many technical changes in the new tax law now being considered by Congress. It may be signed into law by the end of the year.

Mr. Teitell said that, because the provision is now part of the technical-amendments legislation, it is "very likely" to become law.

—ANNE LOWREY BAILEY

Fund Raisers Weigh Implications of Influx of Women into Field

BOSTON

There is wide agreement among observers of fund raising in higher education that the influx of women into the field in recent years has had a noticeable effect on it. There is much less agreement, however, about the precise nature of that effect.

Differences of opinion surfaced quickly when a panel of university officials and fund-raising consultants sought to discuss the subject at the annual meeting here of the Council for Advancement and Support of Education. The title of their session—"Men and Women in Development"—suggested an element of harmony that some of the speakers worried aloud was being threatened by the influx of women into fund raising.

Loss of 'Balance' Feared

Robert G. Smith, vice-president for university relations in the University of Maryland system, said if women kept entering the field in large numbers the representation of the sexes in the field, which is often called institutional advancement, would again be "out of balance" before long. "I think it's very important for our institutions to have a balance between men and women in advancement," he said. "It's not a problem today, but it will be one 10 years from now, when working in this profession will become as unpleasant as it was in 1975, when 79 per cent of all the fund raisers in higher education were men."

"We're not bringing enough young men into the pipeline," said Mr. Smith, adding that at the University of Maryland he had instituted a requirement that the finalists for all fund-raising positions include at least one male.

Rita Bornstein, vice-president for development at the University of Miami, said that if the field is not attracting enough men, "discrimination against women is a bad remedy. What we need to do is work to improve the image of the profession and its status.

"We have to do what's best for our institutions, so we must hire and promote the best people, even if they are women," she said. "But I agree: We need diversity in our fund-raising staffs; that's important. And that might mean hiring affirmatively."

Two consultants on the panel said the large numbers of women who entered the field in recent years had caused the average salaries of fund raisers to drop.

"What we are seeing is a reflection of what happens in the work force at large in our society—as women enter a profession in large numbers, salaries go down," said Barbara W. Snelling, a former vice-president for development at the University of Vermont and now president of a consulting and recruiting company. "Women start at lower salaries and are not given the same raises and promotions as men. There is a set of built-in social attitudes that undervalues women's work and worth."

Women Are Paid Less

A just-completed survey of compensation in the field found that women who headed the fund-raising operations at their institutions earned, on the average, 82 cents for every dollar paid to their male counterparts.

Ms. Bornstein said market forces and not the large numbers of women entering the field were responsible for the drop in salaries. Far from lowering salary levels, she said, the growing numbers of women who are becoming college fund raisers are making important contributions to the professionalization of the field.

"Men always get alarmed when large numbers of women start moving into what had been a mostly male field," she said. "But I think the status and the salaries of fund raisers are affected by occupational and market forces, and not by more women taking jobs as fund raisers."

Many women now becoming fund raisers, Ms. Bornstein said, bring with them impressive credentials and often have experience in other fields, such as law or business.

Such attributes, she said, will ultimately help raise the status of the field.

Ms. Snelling said fund raising, like society at large, was still in a period of transition from old values to newer ones. She said an important focus for the efforts of those concerned about inequity in the compensation of fund raisers would be to work to see that equal pay was awarded for equal work regardless of sex, beginning with entry-level jobs.

—PAUL DESRUISSEAUX

Pay Gap Widens Among Fund Raisers as Colleges Pursue High-Priced 'Stars'

Continued from Preceding Page

feel that if they go out and pay $100,000 they'll get a chief development officer who can come in and turn on the money machine," he said. "But it doesn't work that way. And these very big salaries cause dissatisfaction within the ranks of fund raisers at an institution, which leads to job-hopping and can have serious consequences for donor and prospect cultivation."

Just the same, he said, colleges and universities still seem to be looking "for the fund-raising star who can champion their efforts to attract large-scale support," and are financing the high salaries they must offer such officials by holding down the compensation of their other fund raisers. "I think that approach is going to end up costing them dearly," said Mr. Ast.

According to the Brakeley survey, the average salaries in four of the five key mid-level positions in fund raising—directors of annual giving, development, major gifts, and planned giving—dropped from between $689 to $3,707 last year. In the one category in which there was an increase in the average salary—director of corporate and foundation giving—it was only $88.

Copies of *The Brakeley Compensation Report for 1986* will be available in mid-September for $10 each prepaid from Brakeley, John Price Jones, 1600 Summer Street, Stamford, Conn. 06905.

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In Brief: Philanthropy

Kalamazoo College Given $4-Million by Dow Fund

The Herbert H. and Grace A. Dow Foundation has given $4-million to Kalamazoo College for the construction of a science center.

The grant is the second largest ever made by the Dow foundation and the biggest ever received by an institution or organization in the Kalamazoo area.

Herbert H. Dow, the foundation's president, said the grant had grown out of the Dow fund's interest in excellence in science education and Kalamazoo College's successful record in producing undergraduates who go on to earn Ph.D.'s in the sciences.

The new science center will include facilities for undergraduate and faculty research and studies in biology, physics, and chemistry. —A.L.B.

Caltech Gets $1.2-Million for 'Early Universe' Study

The Kenneth T. and Eileen L. Norris Foundation has given $1.2-million to the California Institute of Technology for a study of the early universe.

A major portion of the gift will be used to build a multi-object spectrograph, a fiber-optic instrument that can record the spectra of light from 100 galaxies simultaneously.

Working with the 200-inch Hale telescope at Caltech's Palomar Observatory, scientists will use the spectrograph to determine, among other things, the distance from the earth in light years of thousands of galaxies. Officials of the institute said the device would help scientists assemble the most detailed picture to date of how the universe evolved.

Because very long exposure times are required to obtain the spectra of faint galaxies, astronomers have charted the evolution of only several hundred galaxies that are more than one billion light years from earth. Using the new instrument, Caltech scientists will be able to chart more than 10,000 galaxies in three years; without it the project would take 50 years.

—A.L.B.

Foundations Support Study on Views of Wealthy Donors

Several foundations have made grants to support a five-year project aimed at finding out why wealthy Americans are not as interested in forming private philanthropies as they once were.

The project is being coordinated by Waldemar A. Nielsen, an author and former foundation official who is regarded by some as a harsh critic of organized philanthropy. Working through the Aspen Institute for Humanistic Studies, Mr. Nielsen plans a series of meetings with wealthy people in different parts of the country to try to determine why they are not inclined to use the grant-making foundation as a vehicle for their charitable giving.

The slowdown over the past two decades in the rate of formation of new foundations has been documented extensively, most recently in a book called *America's Wealthy and the Future of Foundations*, published by the Foundation Center last spring. Mr. Nielsen said his project would use the data collected in that study as a stepping-off point.

Mr. Nielsen is the author of *The Golden Donors: A New Anatomy of the Great Foundations* and *The Big Foundations*.

This month the Gannett Foundation announced a $50,000 grant to support the project, which will cost $300,000. Earlier, the project received $50,000 grants from the Robert Wood Johnson Foundation and the JDR 3rd Fund, and $25,000 grants from the Commonwealth Fund and the Model Foundation.

Mr. Nielsen plans to hold the project's first seminar in the fall. —P.D.

Private Grants and Gifts to Higher Education

CHARLES K. BLANDIN FOUNDATION
100 Pokegama Avenue, North
Grand Rapids, Mich. 55744

Languages. For the International Language Villages program: $85,425 to Concordia College (Minn.).

BURLINGTON NORTHERN FOUNDATION
999 Third Avenue, Seattle 98104-4097

Minorities. For programs to encourage Native Americans to pursue higher education: $130,000 to Dartmouth College.

BUSH FOUNDATION
E-900 First National Bank Building
St. Paul 55101

Faculty. For programs of faculty development: $23,000 to U. of Minnesota, $211,200 to Spelman College and $210,000 to Xavier U. of Louisiana.

Medical care. For a medical information network in South Dakota: $131,778 to U. of South Dakota.

Science education. For the Alliance for Science project: $50,000 to U. of Minnesota.

Support. For the capital campaign: $75,000 to Mount Marty College.

Women. For programs for educationally and economically disadvantaged women: $75,000 to Metropolitan State U. (Minn.).

MEADOWS FOUNDATION
Wilson Historic Block
2922 Swiss Avenue, Dallas 75204

Faculty. For programs of faculty development: $100,000 to Prairie View A&M U.

CHARLOTTE W. NEWCOMBE FOUNDATION
231 Nassau Street, Princeton, N.J. 08542

Graduate education. For fellowships: $527,000 to Woodrow Wilson National Fellowship Foundation.

Student aid. For scholarships: $365,000 divided among 15 colleges and universities related to the Presbyterian Church (U.S.A.).

PHILADELPHIA FOUNDATION
Two Mellon Bank Center,
Philadelphia 19102

Urban programs. For the urban-studies and community-service center: $30,000 to La Salle U.

REEVES BROTHERS FOUNDATION
115 Summit Avenue, Summit, N.J 07901

Support. For a professorship: $666,000 to North Carolina State U.

SPENCER FOUNDATION
John Hancock Center
875 North Michigan Avenue, Chicago 60611

Children. For research on parents' beliefs about children's cognitive development: $70,600 over two years to U. of Florida (principal investigator: Scott A. Miller).

—For a study of parent-child development centers: $41,350 to U. of Houston (principal investigators: Dale Johnson and Janet B. Blumenthal).

—For a study of social constraints on the development of representational tactics of young children: $147,500 over three years to U. of Quebec at Montreal (principal investigator: F. F. Strayer).

Memory. For research on the role of cognitive effort in memory: $19,650 to Skidmore College (principal investigator: Mary Ann Foley).

Occupational success. For a study of race and sex differences in the role of education for occupational success: $78,000 to Johns Hopkins U. (principal investigator: Jomills H. Braddock, II).

Rural areas. For research on organizational change and educational outcomes in rural areas: $81,200 to U. of Alaska at Fairbanks (principal investigator: Gerald A. McBeath).

Social sciences. For research on transmitting cultural knowledge at home and at school: $186,600 over three years to U. of California at Los Angeles (principal investigator: Patricia Goldring Zukow).

—For a study of family factors affecting the competence of low-income black kindergarteners: $147,400 over two years to U. of Chicago (principal investigators: Sydney L. Hans and Judith Smith Musick).

—For a study of the visual translation of cultures: $23,5000 to U. of Southern California (principal investigator: Nancy C. Lutkehaus).

—For research on social gender identity: $98,600 to U. of Sussex (England) (principal investigator: Barbara Lloyd).

—For research on woman social scientists in 20th-century America: $47,000 to Wellesley College (principal investigator: Ellen F. Fitzpatrick).

—For a study of the social history of the American reading public, 1880-1890: $195,500 over three years to U. of Wisconsin at Madison (principal investigator: Carl F. Kaestle).

Teacher education. For a study, "Among College Graduates Certified to Teach: Who Becomes a Teacher?": $35,300 to Harvard U. (principal investigator: Richard J. Murnane).

GIFTS AND BEQUESTS

University of California at Los Angeles. For the biotechnology research and education project in the school of medicine: $100,000 from Richard D. and Veda F. Weisman.

Eastern Connecticut State University. For scholarships: $50,000 from David T. Chase.

Fort Wayne Bible College. For the capital campaign: $20,000 from Trinity Wholesale Distributors and $40,000 from members of the board of governors.

Indiana University of Pennsylvania. For the capital campaign: $100,000 from Phyllis Patchin, Stephen R. Patchin, and Carl Patchin, Jr., and $75,000 from Michael Gendich.

Lake Forest College. For scholarships: $38,000 from the estates of Evalyn Elizabeth Cook Richter and Paul K. Richter.

Oakland University. For the capital campaign: $100,000 from Continental Water Company and $75,000 from Michigan Bell Telephone Company.

Stetson University. For the endowment: $100,000 from an anonymous donor.

THE CHRONICLE
of Higher Education.

ISSN 0009-5982

August 5, 1987 • $1.95
Volume XXXIII, Number 47

News Summary

Articles on inside pages

Folklorists have documented the traditional culture of the people of New Jersey's Pinelands National Reserve. Story on Page 5.

A study of the effects of ending mandatory retirement has been delayed, frustrating some in academe. The A.A.U.P. has decided not to resist uncapping the retirement age for faculty members. Stories on Page 9.

English teachers from kindergarten through college set out strikingly unified classroom goals at a recent conference. Story on Page 9.

A professor at Howard University is forming a national organization to promote the interests of black faculty members. Story on Page 9.

The faculty union at Fairleigh Dickinson University has been decertified by the National Labor Relations Board. Story on Page 10.

Low-income students would receive more generous Pell Grants next year under a bill passed by the House Appropriations Committee. Story on Page 13.

Student-aid administrators are predicting that the new immigration law will cause much confusion on the campuses this fall. Story on Page 15.

A comparison of education and training provisions in trade bills pending before the House and the Senate appears on Page 16.

Students and professors in Chile are again protesting the government's higher-education policies. Story on Page 25.

Japan and China are quarreling over a five-story dormitory building in Kyoto. Story on Page 25.

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South Africa Warns Campuses to Quell Student Activism

Minister threatens to punish universities that fail to act

By HELEN ZILLE

CAPE TOWN

The South African government last week threatened to punish universities that fail to control student activists.

The warning came in a speech to Parliament by the Minister of National Education, F. W. de Klerk, during consideration of his department's budget. Although he did not say specifically what the government might do, observers speculated that state subsidies would be cut for universities that did not develop or enforce disciplinary codes for students.

"The government has great respect for universities and the academic profession, and wishes to maintain the autonomy of these institutions," Mr. de Klerk asserted. "But academic autonomy is not absolute, and if it is upheld to the disadvantage of the country as a whole, we will not hesitate to act."

Parents' Complaints Cited

The minister said the government was sensitive to the fact that taxpayers' money was being used to subsidize each student.

"While the government has an obligation to higher education, it also has an obligation to taxpayers to see that universities do not receive funds which will be used for ulterior motives," he declared.

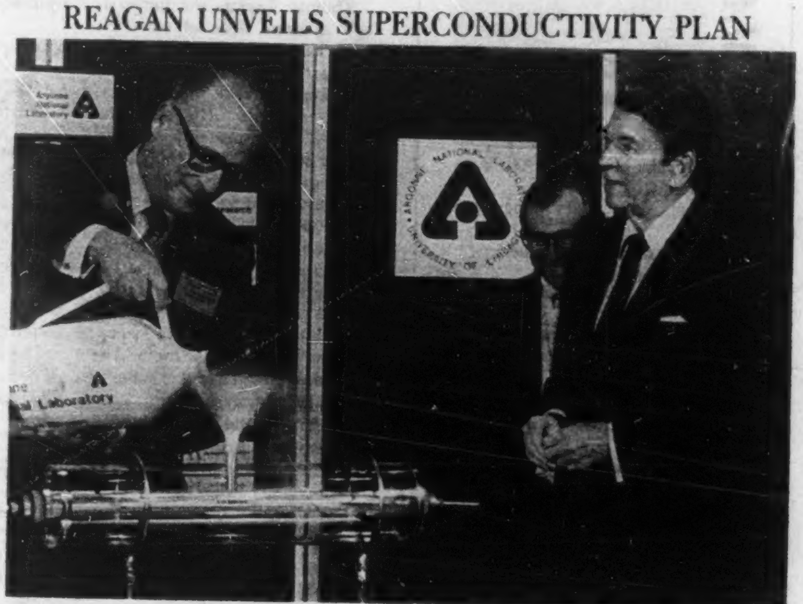
He said the government had received many letters in which parents of university students expressed concern about influences to which their children were being

Continued on Page 26, Column 1

Governors Urge Expansion of International Studies

The nation's governors have urged public colleges to expand their programs in international studies and foreign languages. Page 13.

REAGAN UNVEILS SUPERCONDUCTIVITY PLAN



WIDE WORLD

At a conference on superconductivity, Alan Schriedheim (left) of the Argonne National Laboratory stages an experiment for President Reagan and Howard Baker. Story on Page 4.

Bush Proposes 'College Savings' Plan, Indicates He Would Reverse Efforts to Slash Student Aid

WIDE WORLD

Vice-President George Bush: "In higher education today, the question is just as much access as it is quality—economic access."

By STACY E. PALMER

Vice-President Bush made it clear last week that if he is elected President in 1988 he will not continue Ronald Reagan's efforts to slash federal spending on student aid.

In a speech delivered to a meeting of the National Conference of State Legislatures in Indianapolis, Mr. Bush said the federal government had to do more to help families shoulder the cost of paying for college. He proposed the establishment of a national program to provide tax breaks for college savings and said he would push for the expansion of a program that bases student-loan repayments on the amount the borrowers earn after they graduate from college.

Education will be a central theme of Mr. Bush's Presidential campaign, his aides said. Like many of the other Presidential contenders, both Democratic and Republi-

Continued on Page 18, Column 1

Civil Libertarians Forcing NCAA into Court to Defend Mandatory Drug Tests

By DOUGLAS LEDERMAN

Legal challenges to the National Collegiate Athletic Association's mandatory drug-testing policy are intensifying and may soon force the association into court to defend the program's merits.

Ever since it was established last year, the N.C.A.A. policy has been under fire from civil libertarians and others who contend that mandatory testing, without reasonable suspicion of drug use, violates the privacy rights of athletes. The N.C.A.A. adopted the policy in an effort to combat what it perceived as a growing drug problem among athletes.

The policy requires all athletes at the N.C.A.A.'s member institutions to sign a form at the beginning of the academic year consenting to urinalysis for all post-season competition. Any athlete who refuses to sign the form becomes ineligible to play.

Named a Co-Defendant

Late last month, a judge in Seattle declared the University of Washington's drug-testing program unconstitutional on federal and state privacy grounds. In so doing, King County Superior Court Judge George T. Mattson ordered the N.C.A.A. to join the lawsuit as a co-defendant.

The judge also issued a temporary restraining order prohibiting the N.C.A.A. from requiring that the university participate in the drug-testing program and enjoining the association from punishing the university or its athletes for failing to do so.

The University of Washington's drug-testing program, one of about 130 that have been adopted at individual colleges and universities, was scheduled to go into effect on August 12.

Ernest Morris, the university's vice-president for student affairs, said last week

Continued on Page 24, Column 3

Ways & Means

After many months the Reagan Administration has found someone to nominate for the No. 2 post at the Education Department: Linus Wright, superintendent of the Dallas public schools.

The President is expected to nominate Mr. Wright formally after a routine background check is completed.

The Administration first chose Glenn C. Loury, a Harvard University economics professor, to fill the No. 2 position. But Mr. Loury withdrew his name from consideration amidst charges that he had beaten his girlfriend.

Another of the Administration's candidates, Bruce M. Carnes, who is now Deputy Under Secretary of Education, was told he could not be confirmed because he had alienated lawmakers with his controversial statements on college costs.

Education Secretary William J. Bennett later asked the president of Florida International University, Modesto Maidique, if he would take the job, but Mr. Maidique said he wanted to stay at the university.

▪

Richard F. Celeste, Ohio's liberal Democratic Governor, and Arch A. Moore, Jr., his conservative Republican counterpart in West Virginia, are unlikely political partners. But a chance to pump $4-billion into their region was enough to prompt a political marriage of sorts last week.

At the annual meeting of the National Governors' Association, the two men announced that West Virginia would support Ohio's bid to be the site of the Energy Department's Superconducting Supercollider. Most governors acknowledge that they don't completely understand what the underground particle accelerator will do, but no matter: They are competing fiercely to win it.

Officially, the governors said they had joined forces because "the Ohio–West Virginia region boasts many of the necessary requirements for building the s.s.c., including excellent sub-surface geology, a highly skilled labor force, and a well-established infrastructure."

Governor Moore acknowledged that factors besides altruism had entered into the decision. His state's mountainous terrain probably disqualified it from winning the coveted prize, he said.

Still, he added, the state has one of the most important "resources" needed to obtain the s.s.c.—an influential Congressional delegation, led by the Senate Majority Leader, Robert Byrd.

In return for having its bid backed, Ohio officials promised to help West Virginia companies obtain some of the contracts for building the s.s.c.

Just in case West Virginia's support is not enough, Governor Celeste said his state was spending $2.5-million in its effort to win the s.s.c. He also showed a videotape demonstrating Ohio's advantages; it includes Mr. Celeste saying, "God made Ohio for the s.s.c."

GOVERNMENT & POLITICS

Governors Urge Colleges to Expand Programs in International Studies and Foreign Languages

Improving the economy appears to be moving force behind report and exhortations by state officials

By SCOTT JASCHIK

TRAVERSE CITY, MICH.

The National Governors' Association last week urged public colleges and universities to expand their programs in international studies and foreign languages.

At their annual meeting here, governors spoke frequently, and passionately, about the need for American college students to become more knowledgeable about other countries.

In a new report, *Educating Americans for Tomorrow's World: State Initiatives in International Education*, the governors outlined a range of actions that state officials could take to promote increased activity in international education.

'Political and Economic Price'

As with almost every discussion at the governors' meeting, improving the economy was the primary motivation behind their interest in international affairs.

"We pay a political and economic price for our inability to understand and communicate with our global neighbors," said Virginia Gov. Gerald L. Baliles, a Democrat who is chairman of the N.G.A.'s Committee on International Trade and Foreign Relations.

"Knowing the language of trade is to be able to communicate with the buyers and sellers of the world," he said.

Specifically, Governor Baliles and his committee's report recommended the following actions:

► Colleges should raise or reinstate their foreign-language requirements.

► Geography should receive increased attention at all levels of education.

► Colleges should add courses in the history, culture, and economics of other nations—in particular, Japan's.

► Teacher-education programs should include courses in international education.

► Business schools should require their students to study the economies and business practices of other countries, and should offer similar instruction for those already working in the business world.

The governors at the meeting, as is their habit at such sessions, competed with each other in stating their commitments to international education.

Indiana's Gov. Robert D. Orr, Republican, said, "Schools of business ought not give an M.B.A. to anyone not fluent in at least one foreign language."

Higher-education officials could, and should, force elementary and secondary schools to offer more foreign-language courses just by requiring more language study to enter college, Governor Orr said.

Tennessee's Gov. Ned R. McWherter, a Democrat, said he had learned the value of foreign-language knowledge firsthand.

'We're Involved in a Global Economy'

"I'm a college dropout, and I once went to South America as a shoe salesman without speaking Spanish," Governor McWherter said. "It was difficult."

Said California's Gov. George Deukmejian, a Republican: "We're involved in a global economy, and our future growth depends on how we do in international competition."

He said he favored the recent recommendation by California's Commission for the Review of the Master Plan for Higher

Continued on Page 17, Column 1

House Panel Votes More Money for Pell Grants and Health Institutes

WASHINGTON

Low-income students would receive far more generous Pell Grants next year, under a bill approved by the House Appropriations Committee last week.

The bill would also increase money for the National Institutes of Health by 10.5 per cent, not counting money for research on acquired immune deficiency syndrome. When funds for AIDS research are included, the increase for the institutes would be 12.9 per cent.

For the first time ever, annual spending on Pell Grants would top $4-billion in fiscal 1988, which begins October 1.

The committee said the 15-per-cent increase it approved would allow the maximum grant per student to rise from $2,100 to $2,300—the first increase in three years.

Education Dept. Disagrees

Education Department officials, however, said the $4.45-billion approved by the committee would not be enough to increase the maximum grant by that much. They estimated that about $5-billion would be necessary. If insufficient money is appropriated, either Congress would have to provide more money later or the Education Department would have to reduce grants to some students, department officials said.

The discrepancy in the numbers arose because Congress and the Education Department are required to estimate more than a year in advance how many students will be eligible for Pell Grants and how much they will receive. Each uses a different method to predict future costs.

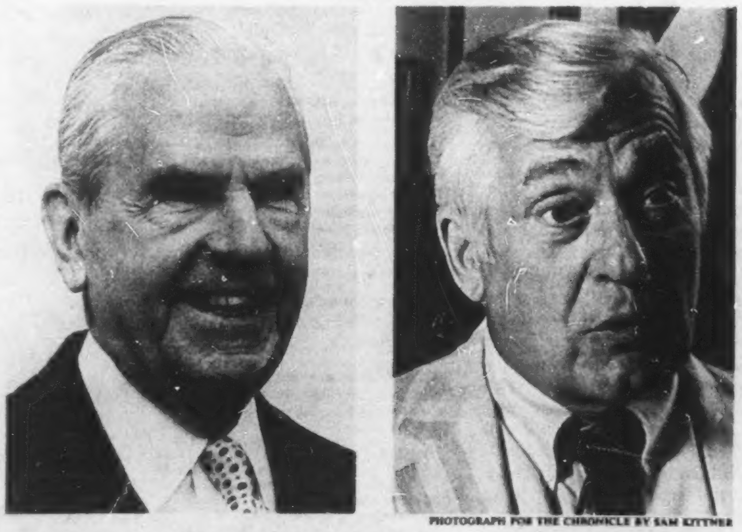
The House committee's bill would provide money for education, labor, and health-and-human-services programs. Under the bill, money for other student-aid programs would increase slightly—between 3 per cent and 6 per cent per program. Grants to encourage minority-group students to attend college and to aid black colleges also would be increased, as would funds for graduate programs and money to help colleges build facilities.

The committee's bill would provide $20.6-billion for all Education Department programs in fiscal 1988, $1.2-billion more than is available for the current fiscal year.

The House panel would nearly double the amount of money being spent on AIDS throughout the Department of Health and Human Services, raising it to a total of $945-million in 1988. That is $179-million

Continued on Following Page

Behind the Appropriations: a Harmonious Duo



PHOTOGRAPH FOR THE CHRONICLE BY SAM KITTNER

Rep. William H. Natcher, a courtly Democrat from Kentucky, and Rep. Silvio O. Conte, a boisterous Republican from Massachusetts, have formed an alliance that has helped education spending bills sail through Congress.

Story on Page 14.

NATCHER, CONTE: CONGRESSIONAL ODD COUPLE

Republican-Democratic Alliance Smooths Way for Education Funds

By ROBIN WILSON

WASHINGTON

When Rep. William H. Natcher, the Democrat who chairs the subcommittee that handles education appropriations, set a record this year by casting his 15,000th roll-call vote, Rep. Silvio O. Conte took to the House floor to applaud him.

"I rise to offer my congratulations to my good friend—and I mean good friend—Bill Natcher," said Mr. Conte, the ranking Republican on Mr. Natcher's subcommittee.

Such praise from a Republican member of an appropriations subcommittee for the panel's Democratic chairman is rare. Indeed, the relationships of the Democratic and Republican leaders of the 11 other House appropriations subcommittees are precarious. And it is not unusual for Republicans to be the most vociferous opponents of bills drawn up by their Democratic colleagues, and vice versa.

Mr. Natcher and Mr. Conte work closely together and usually agree on spending levels for particular programs. The subcommittee's main job each year is to write a bill that provides money for programs that range from student aid to international education to graduate education. The bill also sets spending for labor and health programs. The full Appropriations Committee last week approved the subcommittee's spending bill for fiscal 1988.

Benefits for Higher Education

The alliance between the two men has benefited higher education, Congressional aides say. They cite these examples:

► For four years in a row, an education-spending bill has been signed by President Reagan even though the Administration has consistently advocated deep cuts in education programs and the bills have always awarded increases. Congressional aides say Mr. Natcher and Mr. Conte have worked together and drummed up enough Congressional support for the bills that President Reagan has been reluctant to veto them.

► The education-spending bill typically is considered on the House floor for only a few hours before members vote to approve it. By contrast, other spending bills languish on the floor for days, as subcommittee members argue with each other and attempt to amend the measures. Aides say that because Mr. Conte and Mr. Natcher are not battling each other over spending levels, they can concentrate on gathering support to insure quick passage.

► Mr. Natcher and Mr. Conte persuaded their colleagues to override the President's veto of a supplemental spending bill for education programs in fiscal 1982. Congressional aides say the two lawmakers might not have been successful if their alliance had not been so strong.

Although Mr. Natcher and Mr. Conte work well together and are both considered supporters of education spending, the two men have very different styles and personalities.

Mr. Natcher, who is from Kentucky and has served in Congress for 33 years, is the quintessential Southern gentleman, a courtly man who rarely lets education lobbyists know what he is thinking and who makes his decisions on spending levels without much explanation.

Mr. Conte, who is from Massachusetts, is from the baby-kissing, wheeling-and-dealing, hand-pumping school of politics—a boisterous, friendly man who readily says what he believes and has been known to lambaste those who he thinks are wrong.

> "I did all of the missionary work for the committee and I got those bills signed."

Unlike Mr. Conte, Mr. Natcher shuns publicity and rarely talks with reporters. He declined to be interviewed by *The Chronicle* for this article.

College officials say the bills that come out of Mr. Natcher's subcommittee show he is interested in bolstering student aid and other programs for poor students. But he rarely discusses his personal feelings with college representatives or makes commitments on spending levels. He simply assures lobbyists that he will give them a "good bill."

For those who are unfamiliar with Mr. Natcher's style, the promise can be confusing.

Earlier this year, a group of college presidents came to Washington to lobby for more money for education. One president who visited Congressman Natcher left the meeting "quite excited," according to Charles B. Saunders, Jr., vice-president for governmental affairs of the American Council on Education, which arranged the presidents' trip.

"The president called and said, 'I want to pass along an important bit of intelligence. We talked to Mr. Natcher and he said he was going to give us a very good bill,' " Mr. Saunders related. "I just laughed and said, 'He tells that to everybody.' "

Mr. Natcher's style, however, can make even the most sophisticated Washington lobbyists anxious.

The chairman typically bars the public from the annual meetings at which his subcommittee drafts the education-spending bill. Congressional aides say Mr. Natcher doesn't want subcommittee members to be pressured by lobbyists. As a result, however, college representatives often don't know what the subcommittee has decided until weeks later, when the spending bill is considered by the full Appropriations Committee.

A Fiscal Conservative

That can be dangerous for college officials, because it gives them little chance to lobby for more money if they think the subcommittee's bill doesn't provide enough.

Indeed, college lobbyists believe Mr. Natcher often is too conservative on education spending. "He has a reputation in the education community as a fiscal conservative," said one education lobbyist. "He never gives us as much as we want." Aides to Mr. Natcher's panel point out that education is not the chairman's only consideration; he must attempt to spread federal money over several worthy programs. Another reason for his thriftiness, the aides say, is that he wants bipartisan support of his bills and wants to insure that President Reagan will sign them. As a result, he is reluctant to approve huge increases for education and refuses to use education-spending bills to make statements or embarrass the President.

Before the 1984 election, for example, many Democrats urged Mr. Natcher to get his subcommittee to approve a generous education-spending bill that President Reagan would surely veto. That way, the Democrats reasoned, they could accuse the President of being against education and hurt his chances for re-election. But Mr. Natcher refused, and instead drafted a bill that he knew the President would sign.

'Straight Arrow' Image

Instances like that have earned Mr. Natcher his "straight arrow" image. The chairman also refuses all campaign contributions and won't deal with lobbyists who suggest that he appropriate money in return for special favors from colleges and universities.

"Probably the quickest way to lose your case with Mr. Natcher is to suggest that if he'll help you out, in some way this will bring about special recognition for him," says Donald W. Zacharias, who was president of Western Kentucky University for six years before becoming president of Mississippi State University in 1985.

Several years ago, a board member at one Kentucky college offered to give Mr. Natcher an honorary degree if the chairman would pay special attention to the college when he doled out federal education money. Mr.

House Committee Votes More Money for Pell Grants

Continued from Preceding Page

more than the Administration's $766-million request for AIDS money in the department.

In a move that would involve little money—$2-million—but could change the way other AIDS money is spent, the committee recommended that the Department of Health and Human Services set up four advisory committees on AIDS—one reporting to the Secretary of Health and Human Services, and one each for the National Institutes of Health, the Alcohol, Drug Abuse, and Mental Health Administration, and the Centers for Disease Control. The committees' members would come from outside the federal government, would review each agency's AIDS research strategy and spending, and would be particularly responsible for recommending ways in which researchers outside of federal agencies could be involved more in AIDS research.

$6.6-Billion for NIH

Excluding the AIDS money, the bill would provide $6.6-billion for the National Institutes of Health, $1.4-billion more than the Administration had requested, and $626-million more than is now being spent.

The committee said it wanted to give N.I.H. maximum control over its own spending, but the bill did contain specific instructions in at least two biomedical research areas. It would give $30-million—money not asked for—to the National Institute of General Medical Sciences for the search for the genes responsible for inherited diseases and disorders, a research effort known as "gene mapping." Language in the bill also encouraged the institutes to spend more money in the future on research looking at the effects of behavior and life style on health.

The Senate Appropriations Subcommittee on Labor, Health and Human Services, and Education, is not expected to consider its version of the spending legislation until September. —DAVID L. WHEELER AND ROBIN WILSON

Higher-Education Funds in House Appropriations Committee's Bill

	Fiscal 1987 estimated spending	Fiscal 1988 President's request	Approved House committee
Student assistance			
Pell Grants	$3,862,000,000	$2,710,000,000	$4,450,000,000
Supplemental Grants	412,500,000	0	425,000,000
College Work-Study	592,500,000	0	625,000,000
Income-contingent loans	5,000,000	600,000,000	0
State Student Incentive Grants	76,000,000	0	80,000,000
Perkins Loans	188,000,000	26,000,000	200,000,000
Guaranteed Student Loans	2,132,000,000	1,176,574,000	2,425,000,000
Congressional Teacher Scholarships	15,500,000	0	15,500,000
Graduate support			
Patricia Roberts Harris graduate fellowships	11,750,000	0	15,000,000
Jacob K. Javits fellowships	3,400,000	0	7,000,000
Patricia Roberts Harris public-service fellowships	2,500,000	0	3,000,000
Graduate Assistance in Areas of National Need	—	0	12,000,000
Graduate education for minorities	—	0	5,000,000
Institutional assistance			
Cooperative education	14,400,000	0	14,400,000
Developing institutions	147,208,000	50,741,000	160,000,000
Facilities			
Construction grants	0	0	7,000,000
Loans and insurance	19,205,000	0	—
College housing and academic facilities loans and construction insurance	—	—	90,000,000
Interest subsidies	23,000,000	22,500,000	22,500,000
College Construction Loan Insurance Association	—	0	20,000,000
International education	32,050,000	0	32,050,000
Law School Clinical Experience	1,500,000	0	5,000,000
Veterans' Education Outreach	3,000,000	0	3,000,000
Library resources			
Research libraries	7,000,000	0	12,000,000
Training and demonstration	1,000,000	0	$1,000,000

	Fiscal 1987 estimated spending	Fiscal 1988 President's request	Approved House committee
Aid to disadvantaged			
College-aid migrant programs	$1,200,000	$ 0	$1,400,000
Legal Training for the Disadvantaged	1,500,000	0	2,000,000
Minority Institutions Science Improvement	5,000,000	5,000,000	5,500,000
Programs for disadvantaged students	176,370,000	82,370,000	215,000,000
Education for the handicapped			
National Institute on Disability and Rehabilitation Research	48,500,000	48,500,000	52,000,000
Research and development	18,000,000	18,000,000	19,000,000
Personnel development	67,730,000	50,000,000	71,000,000
Rehabilitation training	29,550,000	25,838,000	30,000,000
Postsecondary programs	5,900,000	5,900,000	6,200,000
Education research and statistics			
Office of Educational Research and Statistics			
Office of Research	20,100,000	21,500,000	21,826,000
Center for Statistics	14,100,000	21,600,000	14,486,000
Programs for the Improvement of Practice	22,100,000	19,600,000	22,057,000
Information Services	7,200,000	7,500,000	7,532,000
Bilingual education			
Bilingual vocational training	3,686,000	0	3,900,000
Training grants	33,564,000	33,564,000	37,023,750
Miscellaneous			
Adult education	105,981,000	130,000,000	130,000,000
Fund for the Improvement of Postsecondary Education	12,163,000	7,500,000	12,163,000
Community-service projects	—	0	1,537,000
Office for Civil Rights	43,000,000	42,975,000	42,333,000
Teacher training	95,177,000	80,000,000	96,000,000
Vocational education	881,967,000	0	899,600,000
Women's educational equity	3,500,000	0	3,500,000
School, College and University partnerships	—	0	5,000,000

Natcher promptly refused. He eventually accepted the degree, but only after other officials at the college assured him that it was not a quid pro quo.

Unlike Mr. Natcher, Mr. Conte is very personable and doesn't shy away from publicity and notoriety. It is one of his proudest accomplishments that he has received honorary degrees from 8 of the 13 colleges and universities in his Congressional district.

In addition, the University of Massachusetts at Amherst recently raised nearly $1-million for a fund, in honor of Mr. Conte, that will be used for faculty stipends and to attract talented students to the campus.

Attended Vocational School

The honorary degrees are especially important to Mr. Conte because he was not always sure that he would earn a degree himself.

"I wanted to go to college when I was a young boy. My dad just said he couldn't afford it and steered me into going to a vocational high school," Mr. Conte explains.

After vocational school, Mr. Conte worked as a machinist for the General Electric Company before being drafted into the Navy during World War II. After his discharge, Mr. Conte enrolled in Boston College, paying his tuition with money from the GI Bill. He earned a bachelor's degree and a law degree in four years.

"I guess it just became an obsession with me that everybody should have a college education if they want to go," Mr. Conte says in explaining why he was interested in getting a seat on the education-appropriations panel.

'Skin Like a Rhinoceros'

During his 16 years on the subcommittee, Mr. Conte has been a champion of student-aid programs, including Pell Grants and campus-based student aid, on which many students at the expensive, private colleges in his Congressional district rely. He is also an advocate of programs to encourage disadvantaged students to attend college.

Mr. Conte says he has had to "develop a skin like a rhinoceros" during his tenure. He is one of the most liberal Republicans in Congress and is under constant attack from his more conservative colleagues for approving what they consider to be too much money for education. Some conservative lawmakers have unsuccessfully tried to remove him from his position on the subcommittee.

'The Young Slasher'

Mr. Conte must also do battle with the Reagan Administration. He goes to the White House each year to try to persuade President Reagan to sign the education-spending bill.

"I worked with the young slasher, [the former White House Budget Director] David Stockman," says Mr. Conte. "I did all of the missionary work for the committee and I got those bills signed."

College representatives are worried that the Natcher-Conte combination will end at the close of the 100th Congress. Mr. Conte was operated on for cancer of the prostate in February, and there are rumors that he may not run for re-election in 1988.

Mr. Conte says he has been feeling better lately and has not yet made a decision on his political future. "I would say that if I feel like this next year, of course I'm going to run," he says. "But it is a matter of taking it day by day."

REPORTER'S NOTEBOOK

For Student-Aid Administrators, Concerns About Laws and Budgets

WASHINGTON

Student-aid administrators are predicting that the new immigration law will cause much confusion on the campuses this fall.

The revised immigration system was one of the hottest topics of discussion at the annual meeting of the National Association of Student Financial Aid Administrators here.

Because of the new law, colleges must be able to prove that all their employees are citizens, including students who hold campus jobs and receive College Work-Study aid. Administrators say they expect delays in distributing aid to students this fall because student workers will be required to submit documents that most of them probably do not possess.

To prove they are citizens or are allowed to work in the United States, students will be required to submit such documents as an original Social Security card, an original or certified copy of a birth certificate, or a U.S. passport.

"It is very unlikely that students are going to have these things, and they can't work until they have them," said Marilyn L. Molnar, director of financial aid at Bentley College.

She said the college usually placed 1,400 students in jobs in the first two weeks of classes, but that would be impossible with the new requirements. The college plans to hire two or three clerical workers in September to help handle the increase in paperwork and answer questions.

Students who apply for aid have long been required to state whether they are U.S. citizens, and administrators say there has not been a problem with students' lying about that.

"I don't think there are illegal aliens in U.S. colleges and universities," said Ms. Molnar. "This is a 12-ton gun aimed at a small segment of the population working in the United States."

A. Dallas Martin, executive director of the association, said college groups were trying to persuade Congress to exempt student workers from the new requirement, but he said it was unlikely that lawmakers would address the issue anytime soon.

■

Congress *has* taken care of another federal requirement that dominated the discussion at last year's annual meeting of the aid administrators in Dallas. The officials complained then that the requirement would cause confusion and a massive increase in paperwork.

The new requirement—that administrators verify the accuracy of information on student-aid applications before they distributed money—was the subject of a key conference session, at which Education Department officials sparred with campus administrators. The policy dominated informal talk at conference luncheons and dinners, too (*The Chronicle*, August 6, 1986).

Campus officials grumbled that they had to verify information on more than half the applications they received, and many said students would have to complete twice as many forms and would be confused when they were asked to submit documentation.

This year's annual meeting had only one session on the verification requirement, and it was held at the same time as meetings on 15 other topics.

Congress came to the rescue, say campus officials, who apparently are relieved with the result.

After the officials complained, Congress directed the Education Department to simplify the procedure and later voted to limit to 30 per cent the proportion of applications the department could require an individual institution to verify.

"If you ever thought that your cards and letters didn't matter, you have ample proof one year later that they did," Claire M. Roemer, director of financial aid at Tarrant County Junior College, told the association's members.

■

New requirements from the federal government aren't the only things that are keeping aid administrators busy. Some officials who attended the conference here said they were spending more and more time helping students budget their money.

It used to be, they said, that students and parents could pay for college without doing much saving or financial planning. But tuition is so high now at many universities that "paying as you go" is impossible.

Administrators said the job was especially tough because students have many more luxury items than they used to and they don't want to give them up. Cars, television sets, telephones, and videocassette recorders are frequently among students' possessions, said Marvin G. Carmichael, director of financial aid at Clemson University. (Ironically, when Education Secretary William J. Bennett suggested that students should "divest" themselves of such possessions, many educators derided him because they said most students lacked luxuries.)

The administrators are trying a variety of tactics to help students and parents manage their money. Among them:

► Florida State University offers a course for academic credit called "Fiscal Fitness for Students."

► Clemson University distributes a "money management" guide for students, which suggests saving money by cutting down on long-distance phone calls, taking the five-day meal plan instead of the seven-day plan, and watching television with a friend instead of going to the movies.

► Utah Valley Community College puts a pamphlet on paying for college called "From Crib to College" into the care packages that area hospitals give to parents before they take home their infants.

Administrators said it pays off to help students plan their spending. Without proper counseling, many students show up in the aid office half way through the year complaining that their money has run out.

—ROBIN WILSON

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8/11/87 C2175-1

THE CHRONICLE
of Higher Education.

ISSN 0009-5982

August 12, 1987 • $1.95
Volume XXXIII, Number 48

News Summary

Articles on inside pages

NOTICE
The next issue
of The Chronicle,
dated September 2,
will be mailed August 28.

The Franchthi Cave in Greece has yielded archaeological evidence of human activity over 25,000 years. Story on Page 4.

Colleges need to recruit more women into science, experts have warned. Story on Page 9.

The supercomputer center in Princeton, N.J., is fighting to stay in the race for leadership in scientific computing. Story on Page 17.

A Massachusetts law requiring foreign students to pay the full cost of their education has come under fire. Story on Page 19.

The priorities of the chairman of two key Senate panels have alarmed some college representatives. Story on Page 19.

Fund raisers for community colleges are working together to attract more private financial support to their institutions. Story on Page 27.

Top law students can command big salaries and lavish perks for a summer job. Story on Page 29.

Canadian researchers are being drawn to U.S. universities by higher pay and better facilities than they can find at home. Story on Page 43.

Academic officials in South Africa have been told to take steps to contain student unrest or risk losing state subsidies for universities. Story on Page 43.

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How Much It Will Cost Students to Attend College This Year

Average charges at public and private institutions

	Public colleges		Private colleges	
	Resident	Commuter	Resident	Commuter
4-year colleges				
Tuition and fees	$1,359	$1,359	$7,110	$7,110
Books and supplies	386	386	392	392
Room and board*	2,745	1,228	3,383	1,249
Transportation	380	664	376	632
Other	919	917	721	790
Total	$5,789	$4,554	$11,982	$10,173
2-year colleges				
Tuition and fees	$687	$687	$4,058	$4,058
Books and supplies	373	373	359	359
Room and board*	—	1,244	2,887	1,037
Transportation	—	742	322	609
Other	—	843	679	674
Total	—	$3,889	$8,305	$6,737

* Room not included for commuter students
— Insufficient data

SOURCE: COLLEGE BOARD

Increases in College Tuition Will Exceed Inflation Rate for Seventh Straight Year

Average at 4-year public institutions: $1,359; at 4-year private institutions: $7,110

By JEAN EVANGELAUF

College tuition will rise faster than inflation for the seventh year in a row this fall. The increases will range from 5 per cent to 8 per cent.

In its annual survey of college costs, the College Board reported last week:

► At four-year public colleges and universities, tuition and required fees will average $1,359, up 6 per cent from 1986-87.

► At four-year private institutions, tuition and fees will rise 8 per cent, to $7,110.

► At two-year public colleges, tuition and fees will average $687, up 5 per cent.

► At two-year private colleges, tuition and fees will increase 6 per cent to an average of $4,058.

For the 12 months ending in June, the Consumer Price Index rose 3.7 per cent. The federal government estimates the inflation rate for 1987 will be about 4 per cent.

Tuition charges at more than 2,700 colleges and universities appear in a Fact-File beginning on Page 33.

Secretary of Education William J. Bennett, who has repeatedly criticized colleges for raising costs faster than inflation, issued the following statement in response to the new tuition figures:

"There they go again—and again, and again. When will they ever stop?"

While the 1987-88 increases are about the same as the previous year's, some modest relief is expected a year from now. A survey released last week by the American Council on Education found that college officials expected the increases to slow to about 4 per cent to 5 per cent in 1988-89.

In issuing its report on college costs, the College Board noted that some five million

Continued on Page 32, Column 1

IRS Hits Graduate Assistants with Audits that Could Cost Each as Much as $3,000

By KATHERINE S. MANGAN

Many graduate students in the Southeast and on isolated campuses elsewhere have been hit with Internal Revenue Service audits that may cost them up to $3,000 apiece.

The students are graduate assistants who received stipends for research or teaching. The audits have puzzled and angered some college and university administrators, who say the stipends have in the past been considered tax-exempt.

"It's an enormous problem," said Gary W. Poehlein, associate vice-president for graduate studies and research at Georgia Institute of Technology.

"Our position is that most of our students are not liable for taxes, but obviously the I.R.S. here doesn't agree. The I.R.S. is going after a bunch of people with small amounts of money who can't afford to hire an attorney."

Inundated with Calls

Most of the audited students are in the Southeast, although problems have cropped up on a few other campuses throughout the country. Officials at colleges where the audits have occurred say they have been inundated with calls from confused students.

At Indiana University's Bloomington campus, between 300 and 400 graduate students have received a notice that they owe several hundred to several thousand dol-

Continued on Page 41, Column 3

TIAA Chief to Tell Colleges Employees Deserve Choice in Pension Investments

By SCOTT HELLER

College employees want and deserve "freedom of individual choice" to invest for their retirement, the chairman of higher-education's leading pension companies will tell college administrators this week.

In a speech to be delivered in Boston, Clifton R. Wharton, Jr., chairman of Teachers Insurance and Annuity Association and College Retirement Equities Fund, describes a "new pension-planning environment" in which employees want to make provisions for their own futures.

His remarks come at a time when the

Continued on Page 10, Column 4

Widespread Piracy by Students Frustrates Developers of Computer Software

By THOMAS J. DeLOUGHRY

"John," a recent graduate of Cornell University, appeared to be the model college student. He earned good grades, was active in campus affairs, and said No to drugs and alcohol.

However, his rectitude did not prevent him from illegally copying about $15,000 worth of copyrighted software. His collection of 180 diskettes, each containing one or two programs for the Apple Macintosh, fills two shoe boxes.

Similar stories of unabashed software piracy have been heard on many campuses around the country. In fact, "John" swapped software with another Cornell student who received the programs via telephone lines from pirates at five other colleges.

Says "Ann," a graduate student at another large university: "I don't know many people who have original software. If I didn't have the capability to copy software, I wouldn't have the knowledge that I have." She says she needs copies of software at home because campus computer facilities are overcrowded, and she makes unauthorized copies because original programs cost too much. "Morality really takes a back burner on all this," she says.

Widespread illegal copying of programs by students in dormitory rooms and campus computer laboratories has frustrated many software publishers, who view each unauthorized copy as lost revenue and feel powerless to stop the pirates.

While some propose to combat the prob-

Continued on Page 31, Column 1

FALL-WINTER 1987-1988

A Calendar of Events in Academe

A special pull-out section of fall and winter meetings follows Page 40.

MARGINALIA

Picture caption in the Nebraska City (Neb.) *News-Press:*

AFGHANISTAN TALK . . . Thomas E. Goutierre, director of the Center for Afghanistan Studies [at the University of Nebraska at Omaha], speaks about the Soviet Union's invasion of the Nebraska City Rotary Club."

It's near the top on every Russian hit list.

▪

Among the services listed in the "Plant Operations Users Guide" at California State University at Hayward is "Fabrication, installation, and repair of teaching aides."

▪

Albion College has received a letter of recommendation containing this high praise: ". . . He was able to convey ideas, illicit assistance, and offer suggestions."

▪

It's come to this (from an announcement issued by the Center for Microcomputer Systems Management at the University of Oklahoma):

"The evaluation of faculty performance for (1) annual merit raises (2) tenure decisions and (3) promotions decisions is an important and necessary function of the fundamental academic units of a college or university. This seminar will give instruction on the Analytic Hierarchy Process (AHP) and its application to the faculty evaluation problem with hands on experience in the use of the personal computer program Expert Choice which enables the routine application of the AHP to complex decision making environments."

▪

According to a call for papers, the theme of the American Technical Education Association's 1988 national conference will be "Technical Education: America's Greatest Offense."

▪

A conference of university librarians from the United States and the Caribbean featured a session described as a "closed meeting of librarians and archivists of the English-speaking Caribbean; observers welcome."

▪

From a flyer advertising the 1987 football program at California Polytechnic State University at San Luis Obispo:

"Senior wide receiver Lance Martin had a record-setting year last fall, catching 41 passes for 715 yards. Other key targets for Sullivan will be returners Claude Joseph and Heath Owens with 28 and 20 catches respectfully."

Respectfully but not meekly, we hope.

—C.G.

In Brief

Auburn U. Found Guilty of Age Discrimination

A federal jury has awarded a total of $164,000 to five professors who accused Auburn University of age discrimination. James Martin, the university's president, said the university would fight the decision.

The jury awarded the professors double damages after finding that the university had "willfully" discriminated against them. The professors, who teach in the business, engineering, and veterinary-medicine schools, claimed they were paid less than younger faculty members with lesser qualifications.

The jury award makes up the difference between what the five professors had earned since 1985 and what professors of the same ranks in similar departments had been paid. A lawyer for the professors said the ruling repudiated the "market approach" of paying higher salaries to new professors in competitive fields to attract them to the university.

University lawyers maintained that the professors had not been as productive as other faculty members.

Controversial President Quits at Duquesne U.

The Rev. Donald S. Nesti, president of Duquesne University, has resigned following months of controversy on the campus. His resignation is effective August 15.

Duquesne's Board of Directors re-elected Father Nesti as president in June, even though both the Student Government Association and faculty members had called for his resignation. Both groups also called for the resignation of Rolando E. Bonachea, vice-president for academic affairs, who will serve as acting president until a new president is found.

Father Nesti and Mr. Bonachea have been criticized since the leaders of the campus folk-dancing troupe were fired in March. Several other firings and resignations followed.

Father Nesti, who joined the university in 1970 as an associate professor of theology, has been president since 1980.

'Literacy Corps' to Train Students to Teach

Two Boston colleges will be the first to train students for a "National Literacy Corps" backed by Sen. Edward M. Kennedy, Democrat of Massachusetts. The college students will learn how to teach children and adults to read.

Endicott and Stonehill Colleges have signed contracts to begin training students in the fall, and several other institutions are expected to join them. The Bank of Boston is donating $25,000 to help finance the program, which will be administered by the Washington Education Project.

Mr. Kennedy is sponsoring legislation that would expand the program to 1,000 colleges and universities across the country.

Harvard's Bok to Review Law-School Tenure Case

Harvard University President Derek Bok will review the controversial tenure case of a law-school professor who charges she was discriminated against because of her left-wing politics and because she is a woman.

A university spokeswoman said Mr. Bok was consulting with law-school faculty members on how best to review the case of Clare Dalton, an assistant professor who is affiliated with the "critical legal studies" school of legal thought.

Ms. Dalton did not win the approval of two-thirds of the law faculty required for tenure. She has threatened to sue.

Law professors around the country have attacked the tenure denial, as well as Mr. Bok's decision to deny tenure to another critical-legal-studies scholar, whom the law faculty had affirmed.

More than 200 law professors have criticized Harvard's actions in a petition that will be sent to the American Association of University Professors and the Association of American Law Schools.

College Sets Drug Tests for Scholarship Students

Barton County (Kan.) Community College will require all students receiving scholarships from the college to take drug tests.

The college originally planned drug tests for its athletes as part of a program similar to those at institutions operated by the Kansas Board of Regents, said Dick Wade, a college spokesman. But Barton's drug-policy committee decided all scholarship recipients should be included in the testing program, he said. He added that he believed Barton was the only college in Kansas testing all scholarship recipients.

"The policy is there to let the students know we're serious about it and we want to help them," Mr. Wade said.

Students whose tests show they have used illegal drugs will receive counseling and be retested. Under the policy, which does not apply to federally financed aid, those testing positive for a second time can be restricted from participating in extracurricular activities, lose their scholarships, and be expelled.

Former BYU Student Sentenced in Drug Case

A former Brigham University student was sentenced to five years' probation after he pleaded guilty to using a university laboratory to manufacture illegal drugs.

Charles Barnes was convicted of making methamphetamine and other illegal drugs at the university's cancer-research laboratory between October 1985 and March 1986.

Mr. Barnes worked in the laboratory as a student assistant from the fall of 1984 to the spring of 1985. He was subsequently allowed to use the lab after he told university officials he wanted to manufacture synthetic fragrances.

New York U. Bars Student Charged in Park Murder

New York University has barred Robert E. Chambers, Jr., the defendant in a widely publicized New York City murder case, from classes in compliance with a university policy concerning students charged with crimes.

Mr. Chambers was indicted last September for the August 26, 1986, murder of Jennifer Dawn Levin in Central Park. He said he had accidentally choked her during a sexual episode. Mr. Chambers also faces unrelated burglary charges.

Howard L. Levine, assistant vice-president for public affairs at N.Y.U., said the university does not discipline all students accused

Enrollment in Church-Related Institutions, Fall 1985

	Number of institutions	Enrollment
Advent Christian Church	1	103
African Methodist Episcopal Zion Church	2	702
African Methodist Episcopal	6	3,473
American Baptist	12	8,307
American Lutheran and Lutheran Church in America	3	2,730
American Lutheran	12	21,258
Assemblies of God Church	11	7,899
Baptist	36	41,163
Brethren Church	3	4,664
Brethren in Christ Church	1	1,846
Christian and Missionary Alliance Church	3	1,740
Christian Church (Disciples of Christ)	11	15,311
Christian Churches and Churches of Christ	10	1,543
Christian Methodist Episcopal	3	1,661
Christian Reformed Church	3	5,268
Church of God of Prophecy	1	245
Church of God	9	5,990
Church of New Jerusalem	1	155
Church of the Brethren	6	8,684
Church of the Nazarene	10	10,757
Churches of Christ	13	10,945
Cumberland Presbyterian	2	636
Evangelical Congregational Church	1	71
Evangelical Convent Church of America	1	1,539
Evangelical Free Church of America	2	1,613
Evangelical Lutheran Church	3	589
Free Methodist	5	5,643
Free Will Baptist Church	3	1,191
Friends	7	7,077
General Conference Mennonite Church	3	1,303
Greek Orthodox	1	161
Interdenominational	6	1,438
Jewish	22	5,472
Latter Day Saints	4	39,406
Lutheran Church-Missouri Synod	15	11,507
Lutheran Church in America	20	22,659
Mennonite Brethren Church	3	1,548
Mennonite Church	5	2,490
Missionary Church, Inc.	1	573
Moravian Church	2	2,352
Multiple Protestant denominations	7	4,964
North American Baptist	1	133
Pentecostal Holiness Church	3	470
Presbyterian U.S. and United Presbyterian	58	52,290
Protestant Episcopal	13	5,344
Protestant, other	8	2,390
Reformed Church in America	5	5,238
Reformed Presbyterian Church	1	1,191
Reorganized Latter Day Saints Church	2	4,517
Roman Catholic	234	452,992
Russian Orthodox	1	36
Seventh-Day Adventists	11	15,993
Southern Baptist	56	88,869
Unitarian Universalist	2	88
United Brethren Church	1	447
United Church of Christ	14	12,568
United Methodist	94	127,236
Wesleyan Church	4	2,394
Wisconsin Evangelical Lutheran Synod	1	520
Other religiously affiliated	7	2,618
All religiously affiliated institutions	786	1,042,012
All public institutions	1,493	9,479,273
All private institutions	1,808	2,767,782
All institutions	3,301	12,247,055

Note: Figures cover only those institutions that provided both affiliation and enrollment information to the federal government.

SOURCE: U.S. DEPARTMENT OF EDUCATION, CENTER FOR EDUCATION STATISTICS

The Chronicle of Higher Education (ISSN 0009-5982) is published weekly except the last two weeks in August and the last two weeks in December, at 1255 Twenty-Third Street, N.W., Washington, D.C. 20037. Subscription rate: $50 per year ($51 if bill is to be sent). Second-class postage paid at Washington, D.C., and at additional mailing offices. Copyright © 1987 by The Chronicle of Higher Education, Inc. Printed in the United States of America. POSTMASTER: Send address changes to The Chronicle of Higher Education, P.O. Box 1955, Marion, Ohio 43305. Member, Audit Bureau of Circulations. The Chronicle reserves the right not to accept an advertiser's order. Only publication of an advertisement shall constitute final acceptance of the advertiser's

of crimes, but does act when "the external charges would seriously and adversely affect the student's standing or would seriously and adversely affect the interests of the university."

Paroled Murderer Barred from Colorado Campus

The University of Colorado at Boulder has refused to allow a paroled convicted murderer to work or attend classes on the campus. John Auld pleaded guilty to the kidnaping and first-degree murder of Anne Marie Heider, a student who was abducted from the campus of Colorado College in 1971. Mr. Auld served 13 years of a life sentence and was paroled in 1986.

In 1985, the university's police chief said Mr. Auld would be barred from the campus once he was paroled. Mr. Auld later appealed that action, but the university told him last month that the ban would remain, because the Colorado State Board of Parole had previously ordered Mr. Auld not to enter any university campus.

Berkeley Seeks to Improve Blacks' Graduation Rate

The University of California at Berkeley has formed a group to find ways to improve the graduation rate of black students, which has been declining.

The four-member panel will review institutional policies and procedures and will study methods used by several special programs on the campus that have been successful in recruiting and assisting black students.

Although the proportion of blacks among freshmen at Berkeley has risen significantly and is expected to reach 11 per cent in the fall, the number graduating has declined since 1974-75, a university spokesman said.

Correction

In a classification of colleges and universities (*The Chronicle*, July 8), the Carnegie Foundation for the Advancement of Teaching omitted Cogswell College, which is in the category of "Schools of Engineering and Technology," and incorrectly listed Thomas College in Georgia as Thomas County Community College, and Wayland Baptist University as Wayland Baptist College.

In addition, the foundation incorrectly classified 26 institutions. Following are the correct classifications for those institutions:

Liberal Arts Colleges I: Alma, Augustana (Ill.), Benedictine, Birmingham Southern, Borromeo, Goshen, Guilford, Gustavus Adolphus, Hampden-Sydney, Hanover, Hendrix, Luther, and Millsaps Colleges; Furman, Nebraska Wesleyan, and Oglethorpe Universities; and Virginia Military Institute.
Liberal Arts Colleges II: Medaille College and University of Minnesota at Morris.
Liberal Arts Colleges II*: Southern Baptist College (Ark.).
Doctorate-Granting Universities I: University of South Florida.
Comprehensive Universities and Colleges II: Florida Southern College and University of Montevallo.
Schools of Religion and Theology: St. John Vianney College Seminary.
Medical Schools and Medical Centers: Thomas Jefferson University.
Schools of Business and Management: American Graduate School of International Management.

A Professor Faces a Tough, Visible, and Thankless Job

He's the only openly homosexual member of Reagan's AIDS advisory panel–and its only active researcher

NEW YORK

Frank Lilly's telephone erupted the evening that NBC broadcast news of his appointment to President Reagan's advisory commission on AIDS. And it hasn't stopped ringing since.

Few of the callers are seeking his opinions as a geneticist, even though he is the only active research scientist among the commission's 13 members. Most who phone—reporters, AIDS activists, members of gay civil-rights groups—do so because Mr. Lilly is also the only openly homosexual member of the commission. They want to know how he plans to represent the interests of gay men, the group hardest hit by the disease.

UPI/BETTMANN NEWSPHOTOS

Frank Lilly, at left, with John Cardinal O'Connor, Roman Catholic Archbishop of New York: "I think the issues are going to be on a much more ideological level, rather than ones of overt homophobia."

Mr. Lilly, a professor of immunogenetics and oncogenetics at Yeshiva University's Albert Einstein College of Medicine here, is a member of the National Academy of Sciences, to which he contributed a chapter on education for a book about AIDS. He is also a former member of the board of the Gay Men's Health Crisis, the pioneering organization that provides services to people with AIDS in New York.

Now Mr. Lilly faces what may well be one of most visible, difficult, and thankless jobs in the seven-year history of the epidemic—that of distilling the medical needs and civil-rights concerns of thousands of people with AIDS, and of millions of homosexual Americans generally, into statements that he can explain to other members of the commission.

Complicating the task are, on one hand, a range of people and organizations with front-line experience in the fight against AIDS, including small but vocal factions that may pressure him to take positions that go beyond the weight of what medical evidence there is. On the other is an Administration that has shown little interest in hearing the gay community's concerns about AIDS-related policy proposals, and that has even seemed willing at times to disregard Surgeon General C. Everett Koop's medical advice when it conflicted with the Administration's ideological goals.

And straight ahead is the commission itself—in full, the Presidential Commission on the Human Immuno-Deficiency Virus Epidemic. Mr. Lilly will be serving alongside people whose ideological backgrounds and scientific expertise vary widely, and he may well find himself helping other members interpret the results of AIDS research. Among his colleagues will be John Cardinal O'Connor, the Roman Catholic Archibishop of New York, who has taken strong stands against homosexual activity, and Woodrow A. Myers, Jr., health commissioner of Indiana, which has been praised for its AIDS programs.

That Mr. Lilly was appointed surprised and pleased many AIDS activists and members of the gay-rights community, who had been worried that the commission would have no gay member at all. But the appointment also angered others.

Sen. Gordon J. Humphrey, Republican of New Hampshire, asserted that the White House should have taken care "to avoid sending the message to society—especially to impressionable youth—that homosexuality is simply an alternative life style." And Larry Kramer, the playwright who helped found Gay Men's Health Crisis, said Mr. Lilly was "better than nobody, but not by much." Mr. Kramer predicted that Mr. Lilly would be "more in sympathy" with his scientific colleagues than with gay men.

Ironically, Mr. Lilly says it was none other than Mr. Kramer who recruited him to serve on the Gay Men's Health Crisis board, which both men have since quit.

▪

Like countless other faculty members across the country, Mr. Lilly has brought a few furnishings from home to lessen the severity of his office—plants, an Oriental rug, an antique chair. His squash racket rests near a folder decorated with the Presidential seal.

"I've got a job ahead of me," Mr. Lilly says. "I want to represent the responsible goals of the gay community—and those goals are not the same as the President's goals."

In the time before the commission's first meeting, which is expected to take place next month, Mr. Lilly says he is talking to as many people as he can about AIDS-related issues. He has been told that once the commission starts its work, it will meet for two or three days once a month. A preliminary report is due on the President's desk in 90 days; the commission has a year to produce a final report.

Mr. Lilly does not expect to encounter difficulties in working with his fellow commissioners. "I don't think the members of the commission are in the position of not having dealt with openly gay people," he says. "I think the issues are going to be on a much more ideological level, rather than ones of overt homophobia."

The ideological issues he hopes to subject to a simple, practical test, he says. "The aim of any recommendations we may make about those issues should be to prevent sexual transmission of the disease," he says. "So the question is, Will a recommendation do that? I'm not sure you need to go any further than that."

"A lot of the measures now being proposed," Mr. Lilly adds, "would be totally ineffectual, and would use up huge amounts of resources."

▪

Now 56, Mr. Lilly was raised in Charleston, W.Va. He at first planned to join his father, a pharmacist, in the family business. But after graduating West Virginia University in 1951, he was drafted into the Army, and by the time he returned to Charleston he knew he did not want to be a pharmacist. He went to Paris instead, and earned a Ph.D. in organic chemistry.

His first research job was with the Memorial Sloan-Kettering Cancer Center, where he discovered—by accident, he says—a previously unknown virus. The discovery prompted him to seek a doctorate in biology and genetics from Cornell University. He has been at Albert Einstein since 1965, investigating retroviruses and genetic patterns of resistance to cancer in mice.

Mr. Lilly says he has never thought of himself as a gay activist, although he is proud of having helped two medical students organize the Einstein Association of Gays and Lesbians, or EAGL.

He remembers clearly the first time he heard about the disease now known as AIDS. "It would have been June or July of '81," he says. "I had just come home from work. My adopted son, who had been listening to NPR, asked me whether I knew anything about this 'gay cancer' he'd heard about." A week later, Mr. Lilly says, came the first article in *Morbidity and Mortality Weekly Report*.

It was some time before the disease made its presence felt at Albert Einstein, he says. "A graduate student in the genetics department died of AIDS several years ago," he says. "He was the first person really close to me to die of it. The genetics department stopped functioning for a few weeks. For many here, it was the first time AIDS touched them personally." Since then, he adds, he has lost several other acquaintances to the epidemic.

"Someday the disease is going to be controlled," he says. "I've thought about it a good bit, and I think there's a very large portion of the population whose sympathy for the gay community has been heightened. Without forgetting the horror of all the deaths, I have a sense that we're going to come out very much sadder, but better off."

—LAWRENCE BIEMILLER

Members of Advisory Committee on AIDS

Serving as chairman of President Reagan's Commission on the Human Immuno-Deficiency Virus Epidemic will be W. Eugene Mayberry, an endocrinologist who is chief executive officer of the Mayo Clinic. In addition to Dr. Mayberry and Frank Lilly, the commission's members are:

Colleen Conway-Welch, dean of nursing at Vanderbilt University.
John J. Creedon, chief executive officer of the Metropolitan Life Insurance Company.
Theresa L. Crenshaw, director of the Crenshaw Clinic, which treats sexual disorders, and past president of the American Association of Sex Educators.
Richard M. De Vos, president of the Amway Corporation.
Burton J. Lee, a practicing physician who is former president of the medical staff at the Memorial Sloan-Kettering Cancer Center.
Woodrow A. Myers, Jr., health commissioner for the State of Indiana.
John Cardinal O'Connor, the Roman Catholic Archbishop of New York.
Penny Pullen, Republican leader of the Illinois House of Representatives.
Cory Servaas, a physician who is director of the Foundation for Preventive Medicine and former editor of the *Saturday Evening Post*.
William B. Walsh, a physician who is president of Project HOPE and professor of internal medicine at Georgetown University.
Adm. James D. Watkins, former chief of naval operations.

College Tuition Increases to Exceed Inflation Rate for Seventh Year

Continued from Page 1

students would share in $21-billion in financial assistance in 1987-88.

"There is still a substantial amount of aid," said Kathleen Brouder, an official with the College Board's financial-aid division. "While it is not sufficient to meet everyone's needs, students shouldn't let the cost figures frighten them."

According to the College Board study, room and board charges this fall will rise more slowly than tuition. At four-year public institutions, they will average $2,745, for an increase of 4 per cent; at four-year private institutions, $3,383, or 6 per cent.

Room and board at two-year private colleges will increase 5 per cent, to $2,887. The College Board did not calculate those charges at two-year public colleges because of insufficient data.

The tuition surcharge for out-of-state students who attend four-year public colleges will rise 7 per cent, to an average of $2,367, while the surcharge at two-year public colleges will rise 10 per cent, to $1,811.

Year-by-year increases in tuition and fees at 4-year institutions

	Public	Private
1977-78	0%	6%
1978-79	5%	7%
1979-80	6%	9%
1980-81	4%	10%
1981-82	16%	13%
1982-83	20%	13%
1983-84	12%	11%
1984-85	8%	9%
1985-86	9%	8%
1986-87	6%	8%
1987-88	6%	8%

Colleges' Explanations Differ

The American Council on Education's new survey of campus trends shows that public and private colleges have different explanations for their recent tuition increases.

At private institutions, the three most important reasons for raising tuition were increasing faculty salaries, cited by 81 per cent of those surveyed; boosting student-aid budgets, cited by 71 per cent; and spending on new or revamped academic programs, cited by 58 per cent.

At public institutions, the top three factors were fulfilling state requirements about tuition levels or the share of costs to be borne by students, cited by 64 per cent of the administrators; making up for cuts in state or local appropriations, cited by 51 per cent; and raising faculty pay, cited by 33 per cent.

The survey results highlight other financial strains that are affecting tuition rates. Over 40 per cent of the colleges reported an increase in the share of costs that students and parents must pay. About one-third reported decreases in freshman enrollments, and 37 per cent said an important factor prompting tuition increases was the need to spread fixed costs among a smaller number of students.

In calculating average college costs for 1987-88, the College Board employed a new method that weighted each institution's tuition by its full-time undergraduate enrollment in fall 1986. In previous years, the costs were not weighted.

"The difference between the two procedures is the difference between average costs charged by institutions and average expenses incurred by students," said Ms. Brouder. "The new methodology will come closer to approximating the experience of the average student."

While using the new method had little impact on the average costs at public colleges, it resulted in a much larger average tuition for four-year private colleges, with their 1987-88 figure $1,165 higher than it would have been using the old formula.

"More students who are enrolled at private four-year colleges are enrolled at the colleges with high costs," said Ms. Brouder. "We don't want people to somehow worry that it's a larger increase than it actually is," she continued. "It's an 8-per-cent increase either way."

Few Enrolled by Least Costly

Examining the College Board's list of the most and least expensive private four-year colleges shows how enrollment weighting affects the average charge, she said.

Nearly all of the least costly colleges enroll fewer than 250 undergraduates, while the majority of the most costly institutions enroll more than 2,500.

Among private colleges, costs for tuition, room, and board this fall range from a low of $2,030 at Alice Lloyd College to a high of $17,990 at Bennington College.

Both Alice Lloyd and Berea College, which is the second least-expensive private institution, have a commitment to meeting college costs of low-income students from Kentucky and neighboring states and do not charge tuition. Both require all students to hold a campus job.

Tuition, room, and board charges at four-year public colleges will range from a low of $2,572 at Henderson State University to a high of $6,724 at the Colorado School of Mines.

The College Board's statistics are based on the reports of 2,176 institutions that provided cost data for 1986-87 and 1987-88.

The complete tuition report, *The College Cost Book, 1987-88*, will be available next month for $10.95 prepaid from College Board Publications, Box 886, New York 10101.

Copies of the American Council on Education's survey report, *Campus Trends, 1987*, are available from the Division of Policy Analysis and Research, A.C.E., One Dupont Circle, N.W., Washington 20036-1193. The price, prepaid, is $5 for council members and $8 for others.

Higher Tuition: College Officials' Forecasts for 1988-89

	Type of institution						
	2-year	Baccalaureate	Comprehensive	Doctorate	Public	Private	All
10 per cent or higher	5%	6%	6%	5%	6%	5%	5%
8-9 per cent	12%	10%	14%	11%	6%	19%	12%
6-7 per cent	15%	49%	34%	41%	18%	44%	29%
4-5 per cent	22%	19%	20%	27%	21%	21%	21%
3 per cent or less	47%	15%	26%	16%	52%	11%	33%
Reasons given for rate increases							
Reduced state and local funding	37%	39%	39%	42%	51%	23%	38%
Computer costs	37%	38%	45%	48%	30%	50%	39%
State-mandated increases in student share of costs*	60%	67%	73%	69%	64%	—	64%
Construction and renovation costs	29%	31%	33%	33%	15%	48%	31%
"Catch-up" increases in faculty salaries	49%	71%	46%	59%	33%	81%	55%
Increased student-aid expenditures	28%	61%	45%	42%	14%	71%	41%
New or expanded academic programs	40%	51%	39%	36%	30%	58%	43%
Fixed costs allocated across fewer students	43%	41%	25%	9%	30%	46%	37%

Note: Results are based on a survey of top administrators at a nationally representative sample of 456 colleges and universities. The response rate to the survey, which was conducted in the spring of 1987, was 82 per cent.

* Public institutions only.

SOURCE: AMERICAN COUNCIL ON EDUCATION

Colleges with the Highest and Lowest Charges for Tuition, Fees, Room and Board

Most expensive, private	
1. Bennington College	$17,990
2. Sarah Lawrence College	17,440
3. Barnard College	17,296
4. University of Chicago	17,190
5. Columbia University: Columbia College	17,120
6. Harvard and Radcliffe Colleges	17,100
7. Dartmouth College	17,074
8. Tufts University	17,028
9. Yale University	17,020
10. Massachusetts Institute of Technology	16,970
Most expensive, public	
1. Colorado School of Mines	$6,724
2. Virginia Military Institute	6,690
3. University of California at San Diego	6,470
4. University of Rhode Island	6,027
5. University of Illinois at Chicago	5,934
6. George Mason University	5,892
7. Maine Maritime Academy	5,875
8. Saint Mary's College of Maryland	5,870
9. University of California at Berkeley	5,859
10. Lyndon State College	5,844
Least expensive, private	
1. Alice Lloyd College	$2,030
2. Berea College	2,175
3. Central Baptist College (Ark.)	2,550
4. Southeastern Baptist College (Miss.)	3,200
5. Wesley College (Miss.)	3,300
6. Selma University	3,350
7. Eastern Christian College	3,360
8. Arkansas Baptist College	3,370
9. Roanoke Bible College	3,383
10. Central Christian College	3,440
Least expensive, public	
1. Henderson State University	$2,572
2. Alabama State University	2,664
3. Middle Tennessee State University	2,698
4. University of Arkansas at Monticello	2,770
5. Minot State University	2,772
6. Western Carolina University	2,774
7. University of Puerto Rico, Rio Piedras	2,780
8. Missouri Southern State University	2,846
9. Jacksonville State University	2,875
10. Midwestern State University	2,922

Note: Data are for four-year institutions only.

SOURCE: COLLEGE BOARD

Widespread Piracy by Students Frustrates Software Developers

Continued from Preceding Page

the other way," he says. "University administrators do not want to look at this problem.

"We're not naïve; faculty members aren't going to pull $1,000 out of their pockets and buy our software." However, if an academic department ordered a program in bulk, it could receive as much as a 75-per-cent discount, he says.

Lack of Money Blamed

At American University, Frank W. Connolly, manager of academic computing, says illegal copying by faculty members is less of a problem than in previous years. Mr. Connolly agrees with Mr. Rosenberg that a lack of money in department budgets could lead some professors to become pirates. They may not want to wait 6 to 12 months for the next budgetary appropriations, he says, so they copy the software. "But that's not a good excuse," he says. "It's a rationalization."

The problem of faculty piracy is "serious, but getting better," says Steven W. Gilbert, director of the Software Initiative at EDUCOM, a consortium of more than 450 colleges with interests in computer technology. The Software Initiative is a project intended to promote development and dissemination of instructional software for higher education.

In a pamphlet mailed to faculty members and administrators in April, EDUCOM noted that unauthorized duplicating of copyrighted software was illegal; that an employee's copying could make an entire college liable to legal action; and that widespread unauthorized copying could make it difficult for colleges and universities to negotiate agreements that would make software more widely and less expensively available to members of the academic community (*The Chronicle*, April 15).

EDUCOM also said that higher education should not tolerate the unauthorized copying of software, because academe has always professed respect for "the intellectual work and property of others."

Mr. Gilbert says that software publishers who demand that universities discipline faculty members "do not understand the culture of higher education."

Licenses for Copying Promoted

Besides stressing education about the illegality of duplicating copyrighted software, EDUCOM is promoting licensing agreements that give colleges the right to copy software for on-campus use.

However, Ms. Millstead of American University is skeptical about education efforts. While some students and faculty members don't know about copyright restrictions, others are well aware that they are breaking the law and do it anyway, she says.

"A lot of American culture says, 'Get away with what you can,' and so there is kind of a thrill involved for pirates," she says.

1987 Graduates Are Offered Higher Starting Salaries, Fewer Jobs

Continued from Page 29

of offers dropping 28 per cent and salaries decreasing slightly, to $26,364.

Engineers faced a particularly tight job market, with severe declines in the number of job offers in several fields. Offers in petroleum engineering, for example, fell 82 per cent; electrical engineering, 35 per cent; and mechanical engineering, 31 per cent.

Even so, salaries rose slightly in all areas of engineering except petroleum, where the average starting pay dropped 6.6 per cent, to $30,816.

In most engineering specialties, as in the past, women were offered slightly higher average salaries than men, but men were offered more than twice as many jobs.

The reverse was true in the humanities, where women were offered lower salaries, but more jobs.

Liberal-arts graduates have fared well by the shift in the United States from a manufacturing to a service economy.

Job offers for humanities graduates increased 29 per cent, with a 5-per-cent increase in the average starting salary, to $20,256.

Of those offers, 53 per cent came from the merchandising and services industry, which includes retail and department stores, fast-food chains, advertising, marketing, and communications services.

As career-placement experts have been attesting in recent years, Ms. Gulick of the council stressed that, in today's job market, liberal-arts graduates are becoming increasingly desirable. Employers have found that such graduates have more flexible job skills than others, thanks to their broad educational backgrounds.

The communications skills that students gain in liberal-arts classes are highly valued by the thriving service industries. "They have to deal with the public," says Ms. Gulick, "and they need the skills that will help them deal with the public."

1987-88 Tuition and Fees at 2,700 Colleges and Universities

Following are the tuition and fees charged at more than 2,700 colleges and universities in the 1986-87 and 1987-88 academic years—including, for 1987-88, the additional tuition that many institutions charge to out-of-state students.

The tuition figures were compiled by the College Scholarship Service, the financial-aid division of the College Board.

An asterisk indicates that the institution provided estimated figures, while "n/a" indicates that the college was not able to supply 1986-87 tuition figures.

The complete tuition report, *The College Cost Book, 1987-88*, will be available next month for $10.95 prepaid from College Board Publications, Box 886, New York 10101.

ALABAMA

	1986-87 Tuition and fees	1987-88 Tuition and fees	1987-88 Added out-of-state tuition
Alabama A&M U*	$980	$1,134	$998
Ala Aviation & Tech C*	610	800	600
Alabama St U*	980	1,044	950
Alexander City St JC	450	600	450
Athens St C*	1,200	1,080	1,080
Auburn U			
Main campus	1,200	1,323	2,046
Montgomery	1,005	1,095	2,190
Bessemer St Tech C*	460	610	600
Birmingham Southern C*	6,270	6,700	0
Booker T Washington JC of Business	2,340	2,780	0
Brewer St JC*	450	600	450
Chattahoochee Valley CC*	450	800	600
Concordia C	2,798	2,946	0
D MacArthur St Tech C	460	810	560
Enterprise St JC*	460	600	450
Faulkner U	3,185	3,185	0
Gadsden St JC*	450	600	450
George C Wallace St CC			
Dothan*	450	600	450
Hanceville*	450	613	450
Selma*	450	800	600
H M Ayers St Tech C*	457	607	450
Hobson St Tech C*	465	615	450
Huntingdon C	3,790	4,250	0
International Bible C	1,860	2,415	0
J F Drake St Tech C*	452	602	460
J M Patterson St Tech C*	450	600	450
Jacksonville St U*	800	975	400
James H Faulkner St JC	450	600	600
Jefferson Davis St JC*	450	600	480
Jefferson St JC*	465	625	480
John C Calhoun St CC*	450	600	450
Judson C	3,255	3,620	0
Lawson St CC*	460	615	600
Livingston U*	1,038	1,188	0
Lurleen B Wallace St JC*	450	600	450
Marion Military Inst	5,000	5,010	0
Miles C	3,500	3,500	0
Mobile C	3,284	3,750	0
Muscle Shoals St Tech C*	450	600	450
N F Nunnelly St Tech C*	460	610	450
National Education Ctr			
National Inst of Tech	3,975	4,025	0
Northeast Alabama St JC*	450	600	450
Northwest Ala St JC*	450	600	600
Northwest Ala St Tech C*	450	605	600
Oakwood C	4,815	4,956	0
Patrick Henry St JC*	450	605	450
Reid St Tech C*	450	450	450
RETS Electronic Inst	2,985	2,930	0
S D Bishop St JC*	485	485	450
Samford U	4,320	4,576	0
Selma U	1,630	1,730	0
Shelton St CC*	450	600	600
Snead St JC*	450	600	600
Southeastern Bible C	2,720	3,240	0
Southern JC	2,710	3,630	0
Southern Union St JC	450	800	600
Southwest St Tech C*	465	610	450
Spring Hill C	6,600	7,130	0
Stillman C	2,734	2,734	0
Talladega C	2,909	3,309	0
Trenholm St Tech C*	458	608	450
Troy St U			
Main campus*	1,146	1,156	543
Montgomery	1,080	1,125	0
Tuskegee U	4,200	4,500	0
U of Alabama			
U campus	1,254	1,500	1,780
Huntsville	1,395	1,500	1,500
U of Montevallo	1,254	1,334	896
U of North Alabama	1,000	1,050	400
U of South Alabama*	1,491	1,491	600
Walker C	1,556	1,616	0
Walker St Tech C*	458	608	450

ALASKA

	1986-87 Tuition and fees	1987-88 Tuition and fees	1987-88 Added out-of-state tuition
Alaska Bible C	1,936	1,936	0
Alaska Pacific U	4,500	4,700	0
Sheldon Jackson C	3,976	4,856	0

ARIZONA

	1986-87 Tuition and fees	1987-88 Tuition and fees	1987-88 Added out-of-state tuition
American Indian Bible C	2,222	2,532	0
Arizona Automotive Inst	4,200	4,200	0
Arizona C of the Bible	3,290	3,550	0
Arizona St U	1,136	1,196	3,432
DeVry Inst of Tech	3,846	3,980	0
Embry Riddle Aeronautical U-Prescott	4,080	4,230	0
Grand Canyon C	3,085	3,350	0
Northern Arizona U	1,136	1,196	2,890
Prescott C	4,575	4,775	0
Southwestern C	3,160	3,460	0
U of Arizona	1,136	1,196	3,432
Western International U	2,850	2,850	0

ARKANSAS

	1986-87 Tuition and fees	1987-88 Tuition and fees	1987-88 Added out-of-state tuition
Arkansas Baptist C	1,350	1,420	0
Arkansas C	4,500	4,500	0
Arkansas C of Tech	3,800	3,800	0
Arkansas St U			
Main campus	882	1,070	1,250
Beebe	672	772	618

ARKANSAS—Continued

	1986-87 Tuition and fees	1987-88 Tuition and fees	1987-88 Added out-of-state tuition
Arkansas Tech U	$920	$1,090	$1,050
Capital City JC	3,375	4,080	0
Central Baptist C	1,042	1,100	0
Crowley's Ridge C	2,500	2,910	0
East Arkansas CC	456	480	336
Garland County CC	528	552	1,200
Harding U	3,407	3,568	0
Henderson St U	892	892	872
Hendrix C	4,598	5,010	0
John Brown U	3,500	3,780	0
Mississippi County CC	660	660	1,380
Ouachita Baptist U	3,450	3,700	0
Philander Smith C	1,776	1,766	0
Phillips County CC*	464	528	456
Rich Mountain CC	528	552	1,152
Shorter C	1,600	1,700	0
Southern Arkansas U			
Main campus	900	1,080	630
El Dorado	648	720	380
Tech	648	720	380
Southern Baptist C	2,378	2,494	0
U of Arkansas			
Main campus	1,030	1,290	1,620
Little Rock	1,000	1,200	1,820
Monticello	934	1,100	1,440
Pine Bluff	930	1,105	1,440
U of the Ozarks	2,010	2,110	0
Westark CC*	528	528	720

CALIFORNIA

	1986-87 Tuition and fees	1987-88 Tuition and fees	1987-88 Added out-of-state tuition
Allan Hancock C	100	100	2,640
American Acad of Dramatic Arts West	4,260	4,600	0
Antelope Valley C	100	100	2,640
Antioch U			
Los Angeles	5,280	5,400	0
San Francisco	5,100	5,400	0
Santa Barbara	5,250	5,400	0
Armstrong C	2,826	3,248	0
Art Center C of Design	5,948	7,025	0
Azusa Pacific U	6,160	6,690	0
Bakersfield C	100	100	2,610
Barstow C	100	100	2,640
Bay-Valley Tech	4,500	4,605	0
Bethany Bible C	3,827	4,400	0
Biola U	5,732	6,516	0
Brooks C	4,580	4,880	0
Brooks Inst Photography	3,900	3,900	0
Butte C	140	140	2,640
Cabrillo C	142	142	2,640
California Baptist C	4,484	4,844	0
Cal C of Arts and Crafts	6,520	6,980	0
California Inst of Tech	10,566	11,159	0
California Inst of Arts	7,800	8,500	0
California Lutheran U	7,635	8,130	0
California Maritime Acad	1,094	998	2,200
California St U Sys			
Bakersfield	624	734	4,410
Chico	697	754	4,410
Dominguez Hills	665	712	4,410
Fresno	705	766	4,410
Fullerton	691	794	4,410
Hayward	663	720	4,410
Long Beach	671	742	4,410
Los Angeles	661	732	4,410
Northridge	701	772	4,410
Poly San Luis Obispo	717	880	4,410
Sacramento*	651	676	4,410
San Bernardino	600	765	4,410
Stanislaus	632	744	4,410
St Poly Pomona	645	706	4,410
Humboldt St U	704	766	4,410
San Diego St U	718	718	4,410
San Francisco St U	662	750	4,410
San Jose St U	727	800	4,410
Sonoma St U	707	784	4,410
Cerritos CC	116	116	2,880
Cerro Coso CC	100	100	2,670
Chabot C	100	100	2,610
Chaffey C	100	100	2,765
Chapman C	8,900	9,800	0
Christ C Irvine	4,990	5,850	0
Christian Heritage C	3,970	4,640	0
Citrus C	100	100	2,700
City C San Francisco	100	100	2,780
Claremont McKenna C	10,080	11,080	0
Coast CC District			
Coastline CC	100	100	2,730
Golden West C	100	100	2,730
Orange Coast C*	100	100	2,730
Cogswell C	5,040	5,800	0
Coleman C	6,475	6,900	0
C for Developmental Studies	3,920	4,295	0
C of Notre Dame	6,500	7,000	0
C of Oceaneering	1,905	2,765	0
C of the Canyons	100	100	2,850
C of the Desert	100	100	3,080
C of the Redwoods	100	100	2,940
C of the Sequoias	100	100	2,640
C of the Siskiyous	100	100	2,640
Columbia C	100	100	2,640
Columbia C Hollywood	3,525	3,825	0
Compton CC	100	100	2,640
Condie JC	3,600	[illegible]	0
Contra Costa CC Sys			
Contra Costa C*	100	100	2,760
Diablo Valley C*	102	102	2,760
Los Medanos C	100	100	2,760
Crafton Hills C	100	100	2,640
Cuesta C*	136	136	2,640
Cuyamaca C	100	100	2,640
Cypress C*	100	100	2,880
D-Q U	3,030	3,030	0
Dominican C San Rafael	6,603	7,400	0
Dominican Sch of Philosophy and Theol	3,615	4,015	0
Don Bosco Tech Inst	2,410	3,010	0
El Camino C	100	100	2,760
Fashion Inst of Design and Merchandising	6,295	6,525	0
Foothill-De Anza CC Dist			
De Anza C	118	118	2,745
Foothill C	100	100	2,745
Fresno Pacific C	5,390	5,830	0
Fullerton C	100	100	2,880
Gavilan CC	112	112	2,640
Glendale CC	100	100	2,640
Golden Gate U	3,598	3,638	0
Grantham C of Engr	1,800	1,800	0
Grossmont CC	100	100	2,640
Hartnell C	100	100	2,730
Harvey Mudd C	10,540	11,180	0
Heald Bus C Rohnert	4,860	4,800	0
Heald Bus C Sacramento	4,875	4,860	0
Heald Business C			
San Francisco	3,837	3,637	0

CALIFORNIA—Continued

	1986-87 Tuition and fees	1987-88 Tuition and fees	1987-88 Added out-of-state tuition
Heald Bus C San Jose	$4,900	$4,585	$ 0
Heald Business C			
Walnut Creek	4,875	4,860	0
Heald Inst of Tech	4,875	5,180	0
Heald's 4C's C	4,875	4,800	0
Hebrew Union C	5,100	5,100	0
Holy Names C	6,570	6,970	0
Humphreys C	2,835	2,981	0
Imperial Valley C	100	100	2,640
John F Kennedy U	4,407	4,590	0
Lake Tahoe CC	100	100	3,420
Lassen C	100	100	2,640
LIFE Bible C	2,562	2,829	0
Loma Linda U	6,700	6,900	0
Long Beach City C	100	100	2,640
Los Angeles CC District			
East Los Angeles C*	100	100	2,910
Los Angeles City C	100	100	2,910
Los Angeles Harbor C	100	100	2,910
Los Angeles Mission C	100	100	2,910
Los Angeles Pierce C*	100	100	2,910
L A Southwest C	100	100	2,910
L A Trade-Tech C	100	100	2,910
Los Angeles Valley C	100	100	2,910
West Los Angeles C*	100	100	2,910
Los Rios CC District			
American River C	100	100	2,730
Cosumnes River C*	100	100	2,730
Sacramento City C	100	100	2,730
Loyola Marymount U	7,288	7,943	0
Marin CC	100	100	3,090
Marymount C	5,995	6,795	0
Master's C	4,070	4,350	0
Mendocino C	100	100	3,150
Menlo C	9,030	9,770	0
Merced C	100	108	2,640
Mills C	9,490	10,290	0
Miracosta C	100	100	2,640
Modesto JC	100	100	2,640
Monterey Inst of International Studies	6,860	7,300	0
Monterey Peninsula C	120	120	2,640
Mount San Antonio C	100	100	2,700
Mount San Jacinto C	100	100	2,640
Mount Saint Mary's C	6,850	7,400	0
Napa Valley C	100	100	2,640
National U	4,185	4,455	0
New C of California	4,000	4,420	0
Northrop U	7,035	7,720	0
Occidental C	10,344	11,171	0
Ohlone C	100	100	2,610
Otis Art Inst	7,130	7,680	0
Pacific Christian C	3,500	3,800	0
Pacific Coast Baptist Bible C	1,400	1,450	0
Pacific Coast C	4,860	5,000	0
Pacific Oaks C	6,500	6,950	0
Pacific Union C	6,540	6,885	0
Palo Verde C	100	100	1,170
Palomar C	100	100	2,640
Pasadena City C	100	100	2,700
Patten C	2,600	2,908	0
Pepperdine U	10,215	11,146	0
Peralta CC District			
C of Alameda	100	100	3,015
Feather River C	106	106	3,000
Laney C	100	100	3,000
Merritt C	100	100	3,000
Vista C*	100	100	3,000
Pitzer C	11,002	11,914	0
Point Loma Nazarene C	5,301	5,472	0
Pomona C	10,690	11,120	0
Porterville C	100	100	2,640
Que[illegible] Holy Rosary C	2,500	2,500	0
Rancho Santiago C*	100	100	2,640
Rio Hondo C	100	100	2,700
Riverside CC*	100	100	2,550
Saddleback C*	100	100	2,640
Saint John's Sem C	2,900	3,470	0
Saint Joseph's C Sem	4,500	4,500	0
Saint Mary's C of Cal	7,126	7,900	0
San Bernardino Valley C*	100	100	2,880
San Diego CC District			
San Diego City C	100	100	2,520
San Diego Mesa C*	100	100	2,520
San Diego Miramar C*	100	100	2,520
San Francisco Art Inst	6,900	7,080	0
San Francisco Conservatory of Music	6,645	6,950	0
San Joaquin Delta C*	100	100	2,610
San Jose Bible C	3,925	3,925	0
San Jose CC District			
Evergreen Valley C	100	100	2,730
San Jose City C*	100	100	2,730
San Mateo Co CC District			
Cañada C*	100	100	2,780
C of San Mateo	100	100	2,730
Skyline C*	100	100	2,730
Santa Barbara City C*	100	100	2,640
Santa Clara U	7,263	8,133	0
Santa Monica C*	100	100	2,910
Santa Rosa JC	100	100	2,640
Scripps C	10,074	10,880	0
Shasta C*	100	100	2,550
Sierra C*	100	100	2,580
Simpson C	4,070	4,470	0
Solano CC*	100	100	2,640
Southern California C	4,886	5,026	0
S Cal Inst of Architecture	6,240	6,860	0
Southwestern C*	100	100	2,520
Stanford U	11,208	11,880	0
State Center CC District			
Fresno City C	100	100	2,920
Kings River CC	100	100	2,840
Taft C*	100	100	2,834
Thomas Aquinas C	7,090	7,780	0
US International U	7,150	7,470	0
U of California			
Berkeley	1,347	1,477	4,290
Davis	1,287	1,467	4,290
Irvine	1,337	1,529	4,290
Los Angeles	1,295	1,425	4,290
Riverside	1,311	1,440	4,290
San Diego	1,422	1,554	4,290
San Francisco	1,380	1,586	4,290
Santa Barbara	1,319	1,430	4,290
Santa Cruz	1,385	1,563	4,290
U of Judaism	4,690	5,330	0
U of La Verne	7,610	8,257	0
U of Redlands	9,285	10,110	0
U of San Diego	7,340	7,840	0
U of San Francisco	7,080	7,740	0
U of Southern California	10,594	10,584	0
U of the Pacific	10,247	11,042	0
U of West Los Angeles	2,960	3,060	0
Ventura Co CC District			
Moorpark C	100	100	2,910
Oxnard C*	100	100	2,910

CALIFORNIA—Continued

	1986-87 Tuition and fees	1987-88 Tuition and fees	1987-88 Added out-of-state tuition
Ventura Co CC District			
Ventura C*	$100	$100	$2,910
Victor Valley C*	100	100	2,640
West Coast Christian C	2,345	2,550	0
West Coast U	5,580	6,240	0
West Hills C	100	100	2,640
West Valley Joint CC Dist			
Mission C	100	100	2,730
West Valley C*	100	100	2,730
Western St C of Law Orange County	7,820	8,200	0
Westmont C	7,470	8,030	0
Whittier C	8,882	9,612	0
Woodbury U	6,120	7,230	0
World C West	6,200	6,600	0
Yeshiva Ohr Elchonon	3,700	4,000	0
Yuba C*	100	100	2,640

COLORADO

	1986-87 Tuition and fees	1987-88 Tuition and fees	1987-88 Added out-of-state tuition
Adams St C	1,166	1,220	1,832
Aims CC	563	552	2,160
Arapahoe CC	661	693	2,340
Bel-Rea Inst of Animal Tech	3,250	3,475	0
Blair JC	2,520	2,800	0
Colorado Christian C	4,335	4,680	0
Colorado C	8,840	9,905	0
Colorado Inst of Art	5,130	5,490	0
Colorado Mountain C			
Alpine	610	630	3,480
Spring Valley	710	630	3,480
Timberline	710	630	3,480
Colorado Sch of Mines*	3,118	3,324	5,522
Colorado St U*	1,687	1,860	3,500
Colorado Tech C	3,240	3,655	0
CC of Aurora	702	784	2,340
CC of Denver	644	864	2,378
Denver Tech C	9,130	5,000	0
Electronic Tech Inst	3,975	4,150	0
Front Range CC	818	861	2,340
Loretto Heights C	6,794	7,380	0
Mesa C	1,154	1,220	2,000
Metropolitan St C	1,143	1,196	3,056
Morgan CC	786	816	2,340
Naropa Inst	4,575	6,865	0
Nazarene Bible C	1,760	1,880	0
Northeastern JC	485	510	1,080
Otero JC	852	930	1,362
Parks C	3,820	3,820	0
Pikes Peak CC	1,026	936	2,264
Pueblo CC	834	880	1,580
Red Rocks CC	820	862	2,340
Regis C	7,158	7,678	0
Rocky Mountain C of Art and Design	3,850	4,225	0
Trinidad St JC	972	1,022	1,610
U of Colorado			
Boulder	1,779	1,880	5,292
Colorado Springs	1,286	1,375	4,144
Denver	1,142	1,236	4,054
Health Sciences Center	3,273	2,882	6,122
U of Denver	8,604	9,286	0
U of Northern Colorado*	1,734	1,844	2,464
U of Southern Colorado*	1,302	1,358	3,364
Western St C of Colorado	1,058	1,376	2,228

CONNECTICUT

	1986-87 Tuition and fees	1987-88 Tuition and fees	1987-88 Added out-of-state tuition
Albertus Magnus C	7,245	7,670	0
Asnuntuck CC	632	708	1,326
Briarwood C	4,920	5,495	0
Bridgeport Engr Inst	3,120	3,120	0
Connecticut C	11,170	11,850	0
Connecticut St U Sys			
Central Conn St U	1,277	1,373	1,790
Eastern Conn St U	1,288	1,382	1,790
Southern Conn St U	1,155	1,238	1,790
Western Conn St U	1,282	1,367	1,790
Fairfield U	7,720	8,550	0
Greater Hartford CC	632	708	1,326
Greater New Haven St Tech C	837	946	1,985
Hartford C for Women	5,900	6,490	0
Hartford St Tech C	837	948	1,985
Holy Apostles C Seminary	2,800	3,060	0
Housatonic CC	632	708	1,326
Manchester CC	632	708	1,326
Mattatuck CC	632	708	1,326
Middlesex CC	632	708	1,326
Mitchell C	7,000	7,475	0
Mohegan CC	632	708	1,326
Northwestern Conn CC	632	708	1,326
Norwalk CC	632	708	1,326
Norwalk St Tech C	837	948	2,826
Paier C of Art	7,310	7,816	0
Post C	6,060	6,060	0
Quinebaug Valley CC	632	708	1,326
Quinnipiac C	6,680	7,615	0
Sacred Heart U	4,986	5,476	0
Saint Alphonsus C	2,900	3,550	0
Saint Basil's C	5,070	5,080	0
Saint Joseph C	7,000	7,500	0
South Central CC	632	704	1,126
Thames Valley St Tech C	837	948	1,985
Trinity C	11,030	12,010	0
Tunxis CC	632	708	1,326
U of Bridgeport	8,125	8,675	0
U of Connecticut	1,937	2,133	3,340
U of Hartford	8,575	9,185	0
U of New Haven	6,430	6,820	0
Waterbury St Tech C	837	948	1,985
Wesleyan U	11,370	12,348	0
Yale U	11,340	12,120	0

DELAWARE

	1986-87 Tuition and fees	1987-88 Tuition and fees	1987-88 Added out-of-state tuition
Brandywine C Widener U	5,200	5,420	0
Goldey Beacom C	3,810	3,900	0
U of Delaware	2,306	2,501	3,290
Wesley C	5,722	5,950	0
Wilmington C	3,630	3,790	0

DISTRICT OF COLUMBIA

	1986-87 Tuition and fees	1987-88 Tuition and fees	1987-88 Added out-of-state tuition
American U	9,004	9,744	0
Benjamin Franklin U	3,600	3,890	0
Catholic U	8,050	8,740	0
Corcoran Sch of Art*	5,895	6,300	0
Gallaudet U	2,384	2,954	0
George Washington U	8,320	9,006	0
Georgetown U	10,180	10,950	0
Howard U	3,915	4,345	0
Mount Vernon C	7,892	8,811	0
Oblate C	3,060	3,060	0
Southeastern U	3,900	4,300	0
Strayer C	3,240	3,240	0
Trinity C	7,480	8,063	0
U of District of Columbia*	634	634	1,800

FLORIDA

	1986-87 Tuition and fees	1987-88 Tuition and fees	1987-88 Added out-of-state tuition
Art Inst Fort Lauderdale	$5,175	$6,035	$ 0
Baptist Bible Inst	1,074	1,140	0
Barry U	6,110	6,670	0
Bethune-Cookman C	3,557	3,775	0
Brevard CC	570	660	680
Broward CC	642	642	696
Central Florida CC	600	690	690
Chipola JC	540	608	630
Clearwater Christian C	3,070	3,250	0
C of Boca Raton	6,900	7,500	0
Daytona Beach CC	630	689	801
Eckerd C	8,220	8,865	0
Edison CC	693	733	786
Edward Waters C	2,715	3,116	0
Embry-Riddle Aeronautical U	4,080	4,230	0
Flagler C	3,470	3,700	0
Florida Atlantic U	1,124	1,104	2,489
Florida Bible C	2,650	2,680	0
Florida Christian C	2,296	2,585	0
Florida C	2,900	3,000	0
Florida CC Jacksonville	615	705	713
Florida Inst of Tech	5,320	5,795	0
Florida International U	910	1,079	2,489
Florida Keys CC	600	600	660
Florida Memorial C	3,350	3,560	0
Florida Southern C	4,550	4,800	0
Florida St U	986	1,100	2,489
Fort Lauderdale C	4,024	4,140	0
Gulf Coast CC	360	399	570
Hillsborough CC	630	675	795
Hobe Sound Bible C	2,345	2,500	0
Indian River CC	600	600	600
International Fine Arts C	6,915	6,915	0
Jacksonville U	5,315	6,170	0
Jones C	2,385	2,610	0
Lake-Sumter CC	680	680	680
Lakeland C	2,025	2,611	0
Manatee JC	615	615	730
Miami Christian C	3,770	4,070	0
Miami-Dade CC	735	735	885
National Ed Ctr Bauder	4,320	4,470	0
National Ed Ctr Tampa	3,150	3,750	0
New England Inst of Tech	5,350	5,634	0
North Florida JC*	623	623	622
Nova U	4,405	4,800	0
Okaloosa-Walton JC	638	600	600
Orlando C	3,150	3,175	0
Palm Beach Atlantic C	4,350	4,800	0
Palm Beach JC	661	735	868
Pasco-Hernando CC*	660	660	660
Pensacola JC	683	728	667
Phillips JC	2,456	2,456	0
Polk CC	600	630	720
Ringling Sch of Art and Design	5,600	6,100	0
Rollins C	8,841	10,006	0
Saint John Vianney C Seminary	2,975	3,045	0
Saint Johns River CC	570	570	570
Saint Leo C	5,620	6,020	0
Saint Petersburg JC	663	736	713
Saint Thomas U	5,525	5,825	0
Santa Fe CC	630	660	660
Seminole CC	690	690	630
South Florida JC	630	660	690
Southeastern C of the Assemblies of God	2,026	2,150	0
Stetson U	6,350	7,010	0
Tallahassee CC	570	600	600
Talmudic C of Florida	3,500	4,100	0
Tampa C	2,850	3,185	0
United Electronics Inst	4,900	4,500	0
U of Central Florida	973	991	2,489
U of Florida	1,008	1,080	2,489
U of Miami	8,880	9,787	0
U of South Florida	1,010	1,241	2,489
U of Tampa	7,522	7,680	0
U of West Florida	982	1,082	2,489
Valencia CC	638	696	847
Warner Southern C	4,245	4,257	0
Webber C	4,100	4,680	0

GEORGIA

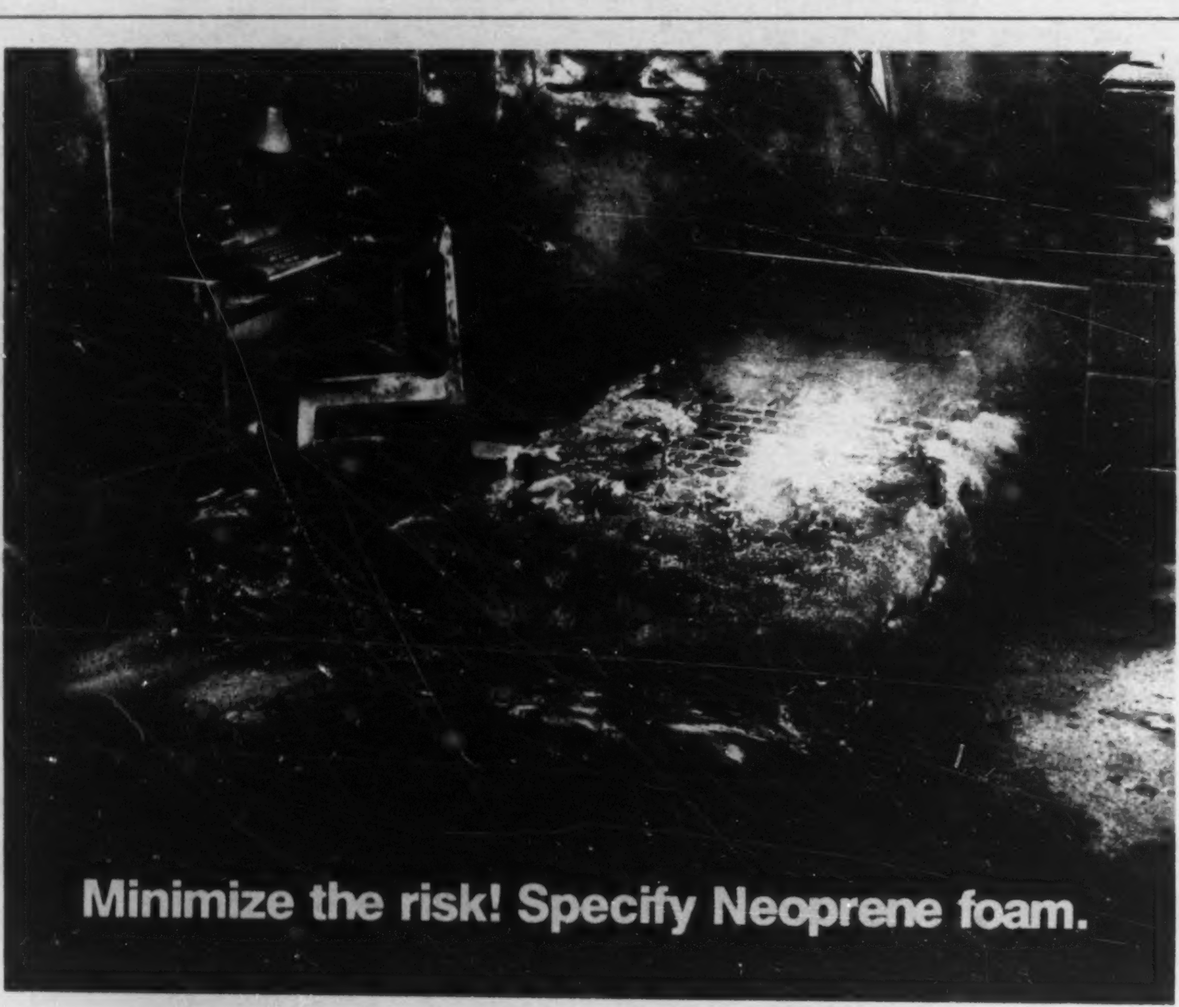
	1986-87 Tuition and fees	1987-88 Tuition and fees	1987-88 Added out-of-state tuition
Agnes Scott C	7,880	8,440	0
Albany JC*	834	879	1,578
Albany St C	1,305	1,407	2,202
Andrew C	2,478	2,610	0
Armstrong St C	1,191	1,269	2,202
Art Inst of Atlanta	5,250	5,865	0
Atlanta Christian C	1,840	1,840	0
Atlanta C of Art	5,800	5,800	0
Augusta C	1,191	1,251	2,202
Bauder Fashion C	4,815	5,015	0
Berry C	4,680	4,965	0
Brenau Women's C	4,641	5,304	0
Brewton-Parker C	2,415	2,550	0
Clark C	4,217	4,486	0
Clayton St C	819	1,146	2,157
Columbus C	1,167	1,272	2,202
Covenant C	5,200	5,500	0
Crandall JC	3,012	3,012	0
DeVry Inst Tech Decatur	3,846	3,980	0
Emmanuel C	2,430	2,745	0
Emmanuel C Sch of Christian Ministries	2,596	2,745	0
Emory U	9,370	10,190	0
Oxford C	6,940	7,860	0
Floyd JC*	821	821	702
Fort Valley St C	1,326	1,404	2,202
Georgia C	1,218	1,298	2,202
Georgia Military C	2,258	2,503	0
Georgia Southern C	1,341	1,401	2,202
Georgia Southwestern C	1,266	1,332	2,202
Kennesaw C	1,143	1,203	2,202
La Grange C	3,080	3,585	0
Macon JC	819	873	1,578
Meadows C of Business	2,520	2,595	0
Mercer U	5,986	6,282	0
Mercer U Atlanta	4,567	4,905	0
Middle Georgia C	954	999	1,578
Morehouse C	4,190	4,420	0
Morris Brown C	3,980	4,420	0
North Georgia C	1,246	1,305	2,202
Oglethorpe U	5,970	6,700	0
Paine C	3,800	4,100	0
Phillips C Columbus	2,600	2,391	0
Phillips JC	2,500	2,500	0
Piedmont C	2,220	2,430	0
Reinhardt C	2,775	2,985	0
Savannah C of Art and Design	4,710	5,250	0
Savannah St C	1,336	1,401	2,202
Shorter C	4,030	4,340	0
South C	2,775	2,985	0
Spelman C	4,470	4,737	0

Continued on Following Page

Tuition and Fees

Continued from Preceding Page

	1986-87 Tuition and fees	1987-88 Tuition and fees	1987-88 Added out-of-state tuition
GEORGIA—Continued			
Thomas C	$2,091	$2,361	$ 0
Toccoa Falls C	3,400	3,806	0
Truett-McConnell C	3,080	3,080	0
U of Georgia	1,662	1,770	2,919
Waycross JC	822	879	1,578
Wesleyan C	5,425	5,785	0
Young Harris C	2,730	2,925	0
HAWAII			
Brigham Young U Hawaii	1,580	1,625	0
Chaminade U of Honolulu	4,140	4,710	0
Hawaii Loa C	5,300	6,800	0
Hawaii Pacific C	3,630	3,750	0
U of Hawaii			
Hilo	300	340	1,750
Manoa	1,000	1,090	2,650
Honolulu CC	280	320	1,750
Kapiolani CC	275	325	1,750
Kauai CC	280	320	1,750
Leeward CC	280	320	1,750
Maui CC	284	325	1,750
West Oahu C	680	730	1,750
Windward CC	280	330	1,750
IDAHO			
Boise Bible C	1,982	2,282	0
Boise St U	1,074	1,068	1,900
C of Idaho	5,830	6,150	0
C of Southern Idaho	784	784	880
Idaho St U	1,000	1,000	1,900
Lewis-Clark St C	1,008	1,008	1,900
North Idaho C	680	680	1,070
Northwest Nazarene C	4,530	4,776	0
Ricks C	1,154	1,214	0
U of Idaho	1,040	1,042	2,000
ILLINOIS			
American Acad of Art	4,928	5,200	0
American Conserv of Music	5,800	6,200	0
Augustana C	6,735	7,134	0
Aurora U	5,450	6,270	0
Barat C	5,665	6,081	0
Belleville Area C	730	840	2,820
Black Hawk C	945	945	1,613
Black Hawk C East	945	945	1,613
Blackburn C	5,700	6,140	0
Bradley U	6,714	7,114	0
Brisk Rabbinical C	2,100	2,100	0
Carl Sandburg C	765	765	3,142
Chicago St U	1,220	1,330	2,280
City Cs of Chicago			
Chicago City-Wide	730	820	1,806
Daley	730	820	1,806
Kennedy-King	730	820	1,806
Loop	730	820	1,806
Malcolm X	730	820	1,806
Olive-Harvey	730	820	1,806
Truman	730	820	1,806
Wright	730	820	1,806
C of Dupage	810	810	2,655
C of Lake County	750	810	2,984
C of Saint Francis	5,190	5,580	0
Columbia C	4,383	4,648	0
Concordia C	4,340	5,105	0
Danville Area CC	680	810	2,340
De Paul U*	5,844	6,318	0
DeVry Inst Tech Chicago	3,846	3,990	0
DeVry Inst Tech Lombard	3,846	3,990	0
East-West U	4,008	4,407	0
Eastern Illinois U	1,493	1,579	2,280
Elgin CC*	930	930	1,927
Elmhurst C	5,540	5,942	0
Eureka C	5,575	6,175	0
Felician C	2,180	2,880	0
Gem City C	1,800	1,950	0
Governors St U	1,108	1,204	2,328
Greenville C	5,742	6,148	0
Harrington Inst of Interior Design	5,585	6,000	0
Hebrew Theological C	1,936	2,615	0
Illinois Benedictine C	5,910	6,557	0
Illinois Central C	720	720	2,713
Illinois C	4,250	4,800	0
Illinois Eastern CCs			
Frontier	450	450	2,342
Lincoln	450	450	2,342
Olney	450	450	2,342
Wabash	450	450	2,342
Illinois Inst of Tech	8,120	8,650	0
Illinois St U	1,562	1,626	2,328
Illinois Tech C	4,125	5,002	0
Illinois Valley CC	420	420	2,512
Illinois Wesleyan U	7,190	7,900	0
John A Logan C*	552	552	2,881
Judson C	5,810	6,180	0
Kankakee CC*	600	600	3,605
Kaskaskia C	638	638	1,837
Kendall C	4,875	5,175	0
Knox C	8,565	9,120	0
Lake Forest C	10,145	10,745	0
Lake Land C	999	1,029	3,360
Lewis and Clark CC	618	618	3,329
Lewis U	5,286	5,586	0
Lincoln Christian C	3,170	3,430	0
Lincoln C	5,100	5,500	0
Loyola U of Chicago	6,085	6,580	0
MacCormac JC	4,050	4,950	0
MacMurray C	5,950	6,400	0
Mallinckrodt C	2,730	3,030	0
McHenry County C	846	906	3,140
McKendree C	4,536	5,065	0
Mennonite C of Nursing	5,132	5,482	0
Metropolitan Business C	3,531	3,723	0
Midstate C	3,060	3,280	0
Millikin U	6,471	7,071	0
Monmouth C	8,235	8,800	0
Moody Bible Inst	236	457	0
Moraine Valley CC	888	1,020	2,840
Morrison Inst of Tech	2,680	2,880	0
Morton C	570	720	3,985
Mundelein C	6,000	6,450	0
NAES C	3,300	3,375	0
National C Chiropractic	5,528	6,050	0
National C of Education	5,220	5,480	0
North Central C	6,570	7,056	0
North Park C	6,566	7,007	0
Northeastern Illinois U	1,320	1,386	2,280
Northern Illinois U	1,630	1,717	2,326
Northwestern U	11,031	11,637	0
Oakton CC	540	540	3,000
Olivet Nazarene U	4,472	4,744	0
Parkland C	620	663	3,302
Parks C of Saint Louis U	4,250	4,580	0
Prairie St C	980	1,024	3,710
Principia C	7,982	8,746	0
Quincy C	5,400	5,870	0
ILLINOIS—Continued			
Richland CC	$ 789	$ 809	$3,465
Robert Morris C			
Carthage	5,235	5,845	0
Chicago	5,235	5,845	0
Rock Valley C	844	844	3,000
Rockford C	7,000	7,000	0
Roosevelt U	5,472	5,832	0
Rosary C	5,940	6,400	0
Rush U	5,730	6,390	0
Saint Augustine C	3,505	4,120	0
Saint Xavier C	5,740	6,180	0
Sangamon St U	1,304	1,346	2,232
Sauk Valley C	870	870	2,320
Sch of Art Inst of Chicago	7,474	8,085	0
Shimer C	5,200	7,200	0
Southeastern Illinois C	570	600	2,190
Southern Illinois U			
Carbondale	1,800	1,859	2,225
Edwardsville	1,353	1,404	2,173
Spertus C of Judaica	3,285	3,465	0
Spoon River C*	930	930	2,867
Springfield C in Illinois	3,480	3,690	0
State CC	675	742	3,990
Thornton CC*	975	980	2,550
ILLINOIS—Continued			
Trinity Christian C	$5,420	$5,880	$ 0
Trinity C	6,010	6,010	0
Triton C	837	918	2,400
U of Chicago	11,581	12,460	0
U of Health Sciences			
Chicago Med Sch	5,616	5,785	0
U of Illinois			
Chicago	2,139	2,202	2,940
Urbana-Champaign	1,980	2,092	2,940
Vandercook C of Music	5,658	6,018	0
Waubonsee CC*	778	778	2,482
W Suburban C of Nursing	4,825	5,105	0
Western Illinois U	1,493	1,576	2,280
Wheaton C	6,652	7,256	0
William Rainey Harper C	840	840	3,038
INDIANA			
Ancilla C	1,382	1,504	0
Anderson C	7,310	5,810	0
Bethel C	4,958	5,452	0
Butler U	6,984	7,388	0
Calumet C Saint Joseph*	2,790	2,800	0
DePauw U	8,200	8,850	0
Earlham C	8,820	9,886	0
Fort Wayne Bible C	4,080	4,375	0
Franklin C Indiana	6,400	6,910	0
Goshen C	5,520	5,720	0
Grace C	4,386	4,850	0
INDIANA—Continued			
Hanover C	$4,680	$4,980	$ 0
Holy Cross JC	2,430	2,430	0
Huntington C	5,500	5,895	0
Indiana Inst of Tech	5,250	5,350	0
Indiana St U	1,650	1,780	2,384
Indiana U			
Bloomington	1,714	1,858	3,290
East	1,468	1,544	2,228
Kokomo	1,448	1,523	2,228
Northwest	1,468	1,544	2,228
Purdue U Fort Wayne	1,453	1,506	3,735
Purdue U Indianapolis	1,623	1,750	3,045
South Bend	1,469	1,544	2,228
Southeast	1,473	1,554	2,229
Indiana Voc-Tech C			
Central	1,250	1,320	1,080
Eastcentral	1,250	1,320	1,080
Kokomo	1,250	1,320	1,080
Lafayette	1,250	1,320	1,080
Northcentral	1,250	1,320	1,080
Northeast	1,250	1,320	1,080
Southcentral	1,250	1,320	1,080
Southeast	1,250	1,320	1,080
Southwest	1,250	1,320	1,080
Wabash Valley	1,250	1,320	1,080
International Business C	5,345	6,095	0
Lockyear C	2,400	2,800	0
Manchester C	5,920	6,330	0
Marian C	4,610	5,010	0
INDIANA—Continued			
Marion C	$5,338	$5,656	$ 0
Martin Center C	2,250	3,600	0
Oakland City C	4,940	5,290	0
Purdue U			
Main campus	1,629	1,816	3,572
North Central	1,497	1,545	2,280
Calumet	1,482	1,562	2,280
Rose-Hulman Inst of Tech	7,305	8,025	0
Saint Francis C	4,192	4,498	0
Saint Joseph's C	6,210	6,640	0
St Mary-of-the-Woods C	5,835	6,480	0
Saint Mary's C	7,490	7,883	0
Saint Meinrad C	3,058	3,272	0
Taylor U	6,325	6,898	0
Tri-State U	5,578	5,958	0
U of Evansville	6,582	7,042	0
U of Indianapolis	5,980	6,440	0
U of Notre Dame	8,800	9,650	0
U of Southern Indiana	1,380	1,448	2,100
Valparaiso U	6,588	7,092	0
Wabash C	7,000	7,545	0
IOWA			
American Inst of Bus	3,175	3,375	0
Briar Cliff C	5,040	5,480	0
Buena Vista C	6,863	7,275	0
Central C	6,421	6,852	0
Clarke C	5,770	6,230	0



Specially formulated Neoprene foam (left) exceeds other foam cushioning materials (right) in open-flame ignition tests.

A sobering statistic: 43% of fatal, residential fires start in upholstered furniture, mattresses or bedding.* Don't contribute unknowingly to such a tragedy. Specify furnishings that contain specially formulated Neoprene foam, and you could help prevent injuries and property damage.

Foam of DuPont Neoprene increases escape time. It meets federal flammability standards and exceeds other foam cushioning materials in open-flame ignition tests.

In addition, Neoprene foam has a combination of durability and comfort properties unmatched by other foam cushioning materials.

So cut the risk from fires. Call DuPont at 1-800-441-7111, extension 69, for more information about DuPont Neoprene.

*U.S. Consumer Products Safety Commission

DuPont manufactures Neoprene, not foam, cushions or mattresses. Methods of construction may significantly affect end-use performance.

DU PONT NEOPRENE MINIMIZES THE RISK.

DU PONT

IOWA—Continued

	1986-87 Tuition and fees	1987-88 Tuition and fees	1987-88 Added out-of-state tuition
Clinton CC	$1,054	$1,004	$ 475
Coe C	6,620	7,290	0
Cornell C	7,824	8,256	0
Des Moines Area CC	974	1,019	885
Divine Word C	3,830	3,950	0
Dordt C	5,320	5,690	0
Drake U	7,130	7,530	0
Ellsworth CC	1,030	1,100	950
Faith Baptist Bible C	3,170	3,320	0
Graceland C	5,345	5,760	0
Grand View C	4,540	4,870	0
Grinnell C	9,158	9,922	0
Hamilton Tech C	3,550	3,750	0
Iowa St U	1,390	1,564	3,336
Iowa Wesleyan C	5,600	5,720	0
Iowa Western CC	1,110	1,110	1,020
Kirkwood CC	945	945	882
Loras C	5,850	6,340	0
Luther C	6,880	7,330	0
Maharishi International U	6,000	6,000	0
Marshalltown CC	1,045	1,100	950
Marycrest C	5,750	6,200	0
Morningside C	6,336	6,486	0
Mount Mercy C	5,230	5,560	0
Mount Saint Clare C	4,540	5,240	0
Muscatine CC	1,070	1,004	475
National Inst of Tech	3,750	4,140	0
North Iowa Area CC	1,086	1,136	510
Northwest Iowa Tech C	1,027	1,064	420
Northwestern C	5,550	5,950	0
Saint Ambrose C	5,970	6,330	0
Scott CC	1,078	1,018	475
Simpson C	6,580	6,986	0
Southeastern CC North	1,014	1,058	502
Southeastern CC South	1,014	1,058	502
U of Dubuque	5,675	6,075	0
U of Iowa	1,390	1,564	3,336
U of Northern Iowa	1,364	1,548	2,332
Upper Iowa U	5,535	6,035	0
Vennard C	3,099	3,267	0
Waldorf C	6,160	4,675	0
Wartburg C	6,480	6,930	0
Westmar C	5,807	6,144	0
William Penn C	6,170	6,870	0

KANSAS

	1986-87 Tuition and fees	1987-88 Tuition and fees	1987-88 Added out-of-state tuition
Allen County CC	525	576	2,189
Baker U	4,720	5,030	0
Barton County CC	565	600	1,970
Benedictine C	4,875	5,020	0
Bethany C	4,672	5,042	0
Bethel C	4,750	5,031	0
Butler County CC	765	810	1,845
Central C	4,300	4,400	0
Cloud County CC	750	750	1,650
Coffeyville CC	530	580	1,950
Colby CC	690	750	1,890
Cowley County CC	570	570	2,010
Dodge City CC	676	690	1,890
Donnelly C	1,650	1,800	0
Emporia St U	1,136	1,191	1,491
Fort Hays St U	1,210	1,248	1,490
Fort Scott CC	570	600	1,950
Friends Bible C	4,200	4,200	0
Friends U	4,760	5,317	0
Garden City CC	620	620	1,920
Haskell Indian JC	20	70	0
Hesston C	4,450	4,450	0
Highland CC	620	734	1,934
Hutchinson CC	660	660	1,890
Independence CC	570	570	1,980
Johnson County CC	675	735	1,815
Kansas City Kansas CC	570	570	1,890
Kansas Newman C	4,430	4,790	0
Kansas St U	1,302	1,332	2,170
Kansas Tech Inst	725	745	1,320
Kansas Wesleyan	4,500	4,985	0
Labette CC	510	510	1,980
Manhattan Christian C	1,974	2,170	0
Marymount C of Kansas	4,230	4,430	0
McPherson C	4,650	4,900	0
Mid-America Nazarene C	3,863	4,088	0
Neosho County CC	530	530	1,950
Ottawa U	4,344	4,626	0
Pittsburg St U	1,102	1,132	1,490
Pratt CC	598	590	1,905
Saint Mary C	4,840	5,070	0
Saint Mary of the Plains C	4,275	4,455	0
Seward County CC	540	540	1,980
Southwestern C	3,070	3,336	0
Sterling C	4,300	4,600	0
Tabor C	4,400	4,610	0
U of Kansas			
Main campus	1,290	1,325	2,170
Medical Center	1,080	1,126	2,170
Washburn U of Topeka	1,794	1,974	960
Wichita St U	1,360	1,399	2,170

KENTUCKY

	1986-87 Tuition and fees	1987-88 Tuition and fees	1987-88 Added out-of-state tuition
Alice Lloyd C	80	80	0
Asbury C	4,515	5,456	0
Bellarmine C	4,500	4,800	0
Berea C	125	141	0
Bowling Green JC	2,592	3,240	0
Brescia C	4,000	4,200	0
Campbellsville C	3,500	3,750	0
Career Com JC of Bus	2,700	3,375	0
Centre C	7,000	7,550	0
Cumberland C	3,280	3,480	0
Eastern Kentucky U	1,020	1,080	2,000
Georgetown C	4,262	4,548	0
Inst of Electronic Tech	3,490	3,945	0
Kentucky Christian C	2,165	2,380	0
Kentucky C of Business	2,880	3,015	0
Kentucky C of Tech	3,995	3,995	0
Kentucky St U	1,052	1,120	2,000
Kentucky Wesleyan C	4,400	4,710	0
Lees C	3,000	3,000	0
Lindsey Wilson C	3,440	3,864	0
Louisville Tech Inst	3,600	4,865	0
Mid-Continent Baptist Bible C	1,030	1,030	0
Midway C	3,700	3,900	0
Morehead St U	1,070	1,130	2,000
Murray St U	1,000	1,080	2,000
Northern Kentucky U	1,000	1,080	2,000
Owensboro JC of Bus	2,800	3,000	0
Pikeville C	3,420	3,600	0
RETS Electronic Inst	4,183	4,805	0
Saint Catharine C	2,815	3,040	0
Spalding U	4,272	4,592	0
Sue Bennett C	2,230	2,687	0
Sullivan JC of Business	4,380	4,800	0
Thomas More C	5,180	5,900	0
Transylvania U	6,725	7,180	0
Union C	4,150	4,370	0
U of Kentucky	1,332	1,412	2,640
Ashland CC	540	560	1,120
Elizabethtown CC	540	560	1,120
Hazard CC	540	560	1,120

KENTUCKY—Continued

	1986-87 Tuition and fees	1987-88 Tuition and fees	1987-88 Added out-of-state tuition
U of Kentucky			
Henderson CC	$ 540	$ 560	$1,120
Hopkinsville CC	540	560	1,120
Jefferson CC	540	560	1,120
Lexington CC	1,332	1,412	2,640
Madisonville CC	540	560	1,120
Maysville CC	540	560	1,120
Paducah CC	540	560	1,120
Prestonburg CC	540	560	1,120
Somerset CC	540	560	1,120
Southeast CC	540	560	1,120
U of Louisville	1,340	1,420	2,640
Watterson C	3,424	4,320	0
Western Kentucky U	1,030	1,090	2,000

LOUISIANA

	1986-87 Tuition and fees	1987-88 Tuition and fees	1987-88 Added out-of-state tuition
Bossier Parish CC*	400	500	500
Centenary C of Louisiana	4,720	5,110	0
Dillard U	4,200	4,500	0
Louisiana C	2,745	3,035	0
Loyola U	5,545	5,625	0
Northeast Louisiana U*	1,218	1,218	1,140
Our Lady of Holy Cross C	3,350	3,970	0
Saint Bernard Parish CC	105	105	0
Saint Joseph Seminary C	2,830	3,850	0
Southeastern La U*	1,326	1,330	1,350
Southern U			
A&M C*	1,124	1,124	1,522
New Orleans*	1,126	1,136	1,558
Tulane U	10,080	11,280	0
Xavier U of Louisiana	4,200	4,400	0

MAINE

	1986-87 Tuition and fees	1987-88 Tuition and fees	1987-88 Added out-of-state tuition
Andover C*	2,875	3,125	0
Bates C	11,835	12,820	0
Beal C	2,820	2,900	0
Bowdoin C	10,850	11,815	0
Casco Bay C	3,380	3,725	0
Central Maine Med Ctr Sch of Nursing	1,880	2,065	0
Central Me Voc-Tech Inst	840	840	800
Colby C	10,930	11,700	0
C of the Atlantic	7,275	7,850	0
Eastern Me Voc-Tech Inst	900	900	800
Husson C	5,975	6,175	0
Kennebec Valley Voc-Tech Inst	800	835	800
Maine Maritime Acad	3,025	2,925	2,035
N Me Voc-Tech Inst	900	945	800
Portland Sch of Art	5,920	6,365	0
Saint Joseph's C	5,375	5,825	0
S Me Voc-Tech Inst	840	905	800
Thomas C	6,084	6,330	0
Unity C	4,664	4,857	1,079
U of New England	6,530	6,930	0
Westbrook C	7,070	7,500	0
YDI Schs	5,390	5,690	0

MARYLAND

	1986-87 Tuition and fees	1987-88 Tuition and fees	1987-88 Added out-of-state tuition
Allegany CC	1,056	1,056	1,480
Anne Arundel CC	917	940	2,700
Baltimore Hebrew C	1,980	2,130	0
Bowie St C	1,683	1,787	1,398
Capitol Inst of Tech	4,695	5,127	0
Catonsville CC	870	870	1,952
Cecil CC	795	880	2,430
Charles County CC	966	966	1,860
Chesapeake C	600	686	2,970
C of Notre Dame of Md	6,125	6,775	0
Columbia Union C	6,180	6,480	0
CC of Baltimore	1,010	1,010	2,290
Coppin St C	1,526	1,624	1,398
Dundalk CC	872	945	2,250
Eastern Christian C	n/a	1,600	0
Frederick CC	995	1,105	2,970
Frostburg St U	1,557	1,696	1,398
Garrett CC	840	840	2,160
Goucher C	8,955	9,530	0
Hagerstown Business C	2,725	2,985	0
Hagerstown JC	898	938	1,470
Harford CC	820	990	2,310
Hood C	8,350	9,010	0
Howard CC	1,080	1,320	3,000
Johns Hopkins U	10,500	11,320	0
Loyola C	6,675	7,420	0
Md C of Art and Design	4,680	5,227	0
Maryland Inst C of Art	7,400	7,900	0
Montgomery C			
Germantown	1,188	1,254	1,980
Rockville	1,188	1,254	1,980
Takoma Park	1,188	1,254	1,980
Mount Saint Mary's C	6,100	6,600	0
Ner Israel Rabbinical C	2,600	2,600	0
Prince Georges CC	1,136	1,290	3,690
St John's C	9,750	10,200	0
Saint Mary's C of Md	2,050	2,270	1,500
Salisbury St C	1,696	1,996	1,398
Sojourner-Douglass C	4,200	4,200	0
Towson St U	1,609	1,736	1,398
U of Baltimore	1,586	1,710	1,478
U of Maryland			
Baltimore	1,574	1,768	3,106
Baltimore County	1,640	1,800	3,106
College Park*	1,601	1,740	3,106
Eastern Shore	1,502	1,684	2,946
U C	2,460	2,610	0
Villa Julie C	3,950	4,290	0
Washington Bible C	3,634	3,928	0
Washington C	7,850	8,710	0
Western Maryland C	7,980	8,750	0
Wor-Wic Tech CC	762	822	3,090

MASSACHUSETTS

	1986-87 Tuition and fees	1987-88 Tuition and fees	1987-88 Added out-of-state tuition
American Int'l C*	5,751	6,111	0
Amherst C	11,141	12,160	0
Anna Maria C	5,735	6,400	0
Aquinas JC Milton	4,335	5,150	0
Aquinas JC Newton	4,900	5,900	0
Assumption C	6,500	7,050	0
Atlantic Union C	6,730	7,130	0
Babson C	9,419	10,308	0
Bay Path JC	5,000	5,600	0
Bay St JC	4,920	5,325	0
Becker JC Leicester	4,280	4,650	0
Becker JC Worcester	4,280	4,650	0
Bentley C	7,800	8,545	0
Berklee C of Music	5,130	5,730	0
Boston Architectural Ctr	1,710	1,880	0
Boston C	9,378	10,203	0
Boston Conservatory	6,480	7,150	0
Boston U	11,100	11,960	0
Bradford C	8,295	8,600	0
Brandeis U	11,275	11,875	0
Central New England C	6,000	6,470	0
Chamberlayne JC	4,690	5,200	0
Clark U	10,450	11,380	0
C of the Holy Cross	9,380	10,300	0
Curry C	8,085	8,710	0
Dean JC	6,800	7,235	0
Eastern Nazarene C	4,756	5,278	0
Elms C	6,250	7,050	0
Emerson C	8,670	9,385	0

MASSACHUSETTS—Continued

	1986-87 Tuition and fees	1987-88 Tuition and fees	1987-88 Added out-of-state tuition
Emmanuel C	$6,921	$7,425	$ 0
Endicott C	6,700	7,050	0
Fisher JC	5,900	6,800	0
Forsyth Sch of Dental Hygienists*	7,598	8,090	0
Franklin Inst of Boston	5,700	6,090	0
Gordon C	7,722	8,348	0
Hampshire C	11,850	12,946	0
Harvard-Radcliffe C	12,225	12,890	0
Hebrew C	2,810	3,550	0
Hellenic C	4,350	4,350	0
Katharine Gibbs Sch	6,445	6,495	0
Laboure C	6,700	7,650	0
Lasell JC	6,629	7,050	0
Lesley C	8,098	8,530	0
Marian Court JC	4,100	4,700	0
Mass Bd of Regents Sys			
Southeastern Mass U	1,301	1,305	2,566
U of Lowell	1,430	1,528	2,566
U of Massachusetts			
Amherst	2,046	2,049	3,024
Boston	1,528	1,645	3,024
Bridgewater St C	1,356	1,356	2,196
Fitchburg St C	1,190	1,244	2,196
Framingham St C	1,398	1,446	2,196
Massachusetts C of Art	1,380	1,486	2,256
Mass Maritime Acad	1,343	1,460	2,256
North Adams St C	1,312	1,456	2,196
Salem St C	1,212	1,282	2,196
Westfield St C	1,251	1,385	2,196
Worcester St C	1,181	1,236	2,196
Berkshire CC	978	940	2,454
Bristol CC	858	868	1,692
Bunker Hill CC	852	852	1,692
Cape Cod CC	941	944	1,692
Greenfield CC	931	934	1,692
Holyoke CC	868	936	1,692
Massasoit CC	876	876	1,692
Mount Wachusett CC	892	892	1,692
North Shore CC	868	868	1,692
Northern Essex CC	972	1,063	2,292
Quinsigamond CC	950	932	1,692
Roxbury CC	820	843	1,692
Springfield Tech CC	869	898	1,692
Mass C of Pharmacy & Allied Health Sciences	6,537	7,275	0
Mass Inst of Tech	11,800	12,500	0
Merrimack C	6,800	7,400	0
Mount Holyoke C	11,355	12,100	0
Mount Ida C	5,975	6,510	0
New England Conservatory of Music	9,225	9,875	0
New England Inst of Applied Arts & Sciences	7,600	8,080	0
Newbury C	5,325	5,850	0
Nichols C	5,420	5,741	0
Northeastern U	7,933	8,497	0
Pine Manor C	9,364	10,000	0
Quincy JC	1,590	1,590	0
Regis C	7,065	7,580	0
Saint Hyacinth C Sem	3,105	3,105	0
Saint John's Seminary C	2,800	3,000	0
Sch of Museum of Fine Arts of Boston	6,915	7,520	0
Simmons C	9,290	10,044	0

MASSACHUSETTS—Continued

	1986-87 Tuition and fees	1987-88 Tuition and fees	1987-88 Added out-of-state tuition
Simon's Rock of Bard C	$10,285	$11,170	$ 0
Smith C	10,867	11,260	0
Springfield C	6,210	6,800	0
Stonehill C	6,550	7,245	0
Suffolk U	5,846	6,350	0
Swain Sch of Design	6,100	6,100	0
Tufts U	11,210	12,088	0
Wellesley C	10,980	11,690	0
Wentworth Inst of Tech	5,940	6,240	0
Western New England C	5,874	6,262	0
Wheaton C	10,840	11,490	0
Wheelock C	7,816	8,424	0
Williams C	10,933	11,782	0
Worcester Polytech Inst	9,820	10,800	0

MICHIGAN

	1986-87 Tuition and fees	1987-88 Tuition and fees	1987-88 Added out-of-state tuition
Adrian C	6,526	7,036	0
Albion C	7,214	7,758	0
Alma C	7,550	8,026	0
Alpena CC*	780	870	1,020
Andrews U	6,300	6,690	0
Aquinas C	5,982	6,300	0
Baker JC	3,020	3,620	0
Bay de Noc CC	853	902	1,050
Calvin C	5,300	5,650	0
Ctr for Creative Studies	6,120	6,375	0
C S Mott CC*	980	980	840
Cleary C	3,510	3,645	0
Concordia C	4,504	4,904	0
Davenport C of Business	4,595	4,775	0
Detroit C of Business	3,965	4,365	0
Eastern Michigan U	1,454	1,472	2,047
Ferris St C	1,671	1,749	1,797
Glen Oaks CC*	840	882	420
GMI Engr and Mgmt Inst	5,464	5,872	0
Gogebic CC	690	690	780
Grace Bible C	2,310	2,650	0
Grand Rapids Baptist C	4,030	4,216	0
Grand Rapids JC*	980	980	1,140
Grand Valley St C*	1,566	1,632	1,912
Great Lakes Bible C	2,490	2,663	0
Highland Park CC*	770	1,180	465
Hillsdale C	6,670	7,410	0
Hope C	6,780	7,290	0
Jackson CC	930	990	540
Jordan C	3,600	3,800	0
Kalamazoo C	8,400	8,988	0
Kalamazoo Valley CC	630	690	1,380
Kellogg CC	735	735	1,140
Kendall Sch of Design	5,160	5,670	0
Kirtland CC	653	793	600
Lake Michigan C	840	930	540
Lake Superior St C*	1,455	1,608	1,286
Lansing CC*	780	780	768
Lawrence Inst of Tech	2,901	3,306	0
Lewis C of Business	3,600	3,900	0
Macomb CC*	960	995	825
Madonna C	2,690	2,840	0
Marygrove C	4,485	4,793	0
Mercy C of Detroit	5,008	5,108	0
Michigan Christian C	3,226	3,452	0
Michigan Tech U*	1,797	1,950	2,483
Mid Michigan CC	816	874	743
Monroe County CC	580	580	270
Montcalm CC	774	774	480
Muskegon Business C	3,220	3,620	0
Muskegon CC*	870	950	700

MICHIGAN—Continued

	1986-87 Tuition and fees	1987-88 Tuition and fees	1987-88 Added out-of-state tuition
Nazareth C Kalamazoo	$5,760	$6,152	$ 0
North Central Mich C*	871	871	0
Northern Michigan U*	1,560	1,626	2,010
Northwestern Michigan C	1,035	1,113	864
Northwood Inst	5,400	5,830	0
Oakland CC*	780	780	810
Olivet C	5,480	5,580	0
Reformed Bible C	3,670	3,665	0
Sacred Heart Sem C	2,625	2,750	0
Saginaw Valley St C*	1,643	1,643	1,477
St Clair County CC	960	990	1,170
Saint Mary's C	3,090	3,090	0
Schoolcraft C	923	923	952
Siena Heights C	4,710	5,190	0
Southwestern Mich C	840	900	360
Spring Arbor C	5,735	6,335	0
Suomi C	7,000	7,300	0
U of Detroit	6,360	6,960	0
Washtenaw CC	870	870	930
Wayne County CC	860	860	840
Wayne St U	1,760	1,805	2,151
West Shore CC	829	889	1,050
William Tyndale C	2,740	3,220	0

MINNESOTA

	1986-87 Tuition and fees	1987-88 Tuition and fees	1987-88 Added out-of-state tuition
Alexandria Voc-Tech Inst*	1,270	1,370	1,335
Augsburg C	6,830	7,385	0
Bethany Lutheran C	4,340	4,600	0
Bethel C	6,590	7,100	0
Carleton C	10,250	11,015	0
C of Saint Benedict	6,235	6,730	0
C of Saint Catherine	6,425	7,026	0
C of Saint Scholastica	6,265	6,636	0
C of Saint Teresa	6,430	6,850	0
C of Saint Thomas	6,417	6,881	0
Concordia C Moorhead	6,430	6,755	0
Concordia C St Paul	4,950	5,610	0
Dakota County Area Voc-Tech Inst*	1,496	1,197	1,197
Dr Martin Luther C	1,950	2,055	0
Gustavus Adolphus C	7,850	8,425	0
Hamline U	7,569	8,225	0
Macalester C	8,925	9,730	0
Medical Inst of Minn	3,525	4,170	0
Minneapolis C of Art Design	6,620	6,940	0
Minnesota Bible C	2,250	2,400	0
Minnesota CC System			
Anoka-Ramsey CC	1,193	1,238	619
Austin CC	1,193	1,238	619
Brainerd CC	1,193	1,238	619
Fergus Falls CC	1,193	1,238	619
Hibbing CC	1,193	1,238	619
Inver Hills CC	1,193	1,238	619
Itasca CC	1,193	1,238	619
Lakewood CC	1,193	1,238	619
Mesabi CC	1,193	1,238	619
Minneapolis CC	1,193	1,238	619
Normandale CC	1,193	1,238	619
North Hennepin CC	1,193	1,238	619
Northland CC	1,193	1,238	619
Rainy River CC	1,193	1,238	619

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Tuition and Fees *Continued from Preceding Page*

MINNESOTA—Continued

	1986-87	1987-88	
	Tuition and fees	Tuition and fees	Added out-of-state tuition
Minnesota CC System			
Rochester CC	$1,193	$1,238	$ 619
Vermilion CC	1,193	1,238	619
Willmar CC	1,170	1,238	619
Worthington CC	1,193	1,238	619
National Education Ctr			
Brown Inst	4,800	4,800	0
North Central Bible C	3,520	3,880	0
Northwest Tech Inst	4,225	4,665	0
Northwestern C	5,775	6,525	0
Pillsbury Baptist Bible C	2,679	2,750	0
Saint John's U	6,235	6,730	0
Saint Mary's C	6,250	6,710	0
Saint Olaf C	7,725	8,215	0
Saint Paul Bible C	3,990	4,140	0
St Paul Tech-Voc Inst*	1,413	1,537	1,507
Sch of Associated Arts	3,753	4,300	0
St U System of Minnesota			
Bemidji St U	1,596	1,622	853
Mankato St U	1,595	1,620	853
Metropolitan St U	1,371	1,397	853
Moorhead St U	1,653	1,577	853
Saint Cloud St U	1,595	1,604	853
Southwest St U	1,595	1,652	853
Winona St U	1,570	1,652	853
U of Minnesota			
Duluth	1,925	2,006	2,636
Morris	1,899	1,977	2,636
Tech C Waseca	1,833	1,913	2,636
Twin Cities	1,969	2,054	2,636

MISSISSIPPI

	1986-87	1987-88	
	Tuition and fees	Tuition and fees	Added out-of-state tuition
Belhaven C	4,620	4,890	0
Blue Mountain C	2,630	2,784	0
Clarke C	2,450	2,600	0
Copiah-Lincoln JC	550	610	600
East Central JC	540	670	400
East Mississippi JC*	630	620	510
Hinds JC	600	600	1,224
Holmes JC	600	600	800
Itawamba CC	600	600	490
Mary Holmes C	1,995	1,995	0
Meridian JC	600	600	600
Millsaps C	6,035	6,625	0
Mississippi C	3,594	3,850	0
Mississippi Delta JC	565	565	600
Mississippi Gulf Coast JC			
Jackson County	544	600	480
Jefferson Davis	544	660	480
Perkinston	544	660	480
Northeast Mississippi JC	570	600	650
Northwest Mississippi JC	754	754	600
Phillips JC of Jackson	2,875	3,025	0
Phillips JC of Mississippi			
Gulf Coast	2,900	3,125	0
Rust C	3,050	3,050	0
Southeastern Baptist C	1,680	1,800	0
Southwest Mississippi JC	500	500	700
Tougaloo C	3,356	3,538	0
Wesley C	1,600	1,800	0
William Carey C	3,070	3,070	0
Wood JC*	1,590	1,590	0

MISSOURI

	1986-87	1987-88	
	Tuition and fees	Tuition and fees	Added out-of-state tuition
Avila C	4,780	5,180	0
Baptist Bible C	1,270	1,420	0
Basic Inst of Tech	3,715	3,715	0
Calvary Bible C	2,610	2,644	0
Central Bible C	2,310	2,530	0
Central Christian C			
of the Bible	1,700	1,700	0
Central Methodist C	4,950	5,150	0
Central Missouri St U	1,254	1,310	1,132
Columbia C	5,070	5,070	0
Conception Seminary C	3,880	3,960	0
Cottey C	2,400	3,000	0
Crowder C	510	568	912
Culver-Stockton C	4,900	5,190	0
DeVry Inst of Tech			
Kansas City	3,846	3,990	0
Drury C	5,105	5,415	0
East Central C	540	600	600
Evangel C	3,460	3,938	0
Fontbonne C	5,565	5,950	0
Hannibal-LaGrange C	3,572	3,800	0
Harris Stowe St C	952	1,026	985
Jefferson C	495	495	495
Kansas City Art Inst	7,800	7,800	0
Kemper Military JC	5,900	5,900	0
Lincoln U*	1,200	1,200	1,200
Lindenwood C	5,280	5,760	0
Longview CC	720	720	780
Maple Woods CC	720	750	930
Maryville C St Louis	5,500	5,950	0
Mineral Area C	480	480	690
Missouri Baptist C	3,800	4,200	0
Missouri Southern St C	1,000	1,090	1,010
Missouri Valley C	5,070	6,370	0
Missouri Western St C	1,052	1,100	972
Moberly Area JC	450	510	1,570
Northeast Missouri St U	1,020	1,270	1,130
Northwest Missouri St U	990	1,080	900
Ozark Christian C	1,700	2,200	0
Park C	4,920	5,160	0
Penn Valley CC	750	810	870
Pioneer CC	720	780	900
Platt C	4,150	4,300	0
Research C of Nursing	5,480	5,910	0
Rockhurst C	5,490	5,910	0
St Louis Christian C	2,068	2,228	0
St Louis C of Pharmacy	3,670	4,020	0
St Louis CC			
Florissant Valley	795	795	630
Forest Park	795	795	630
Meramec	795	795	630
St Louis Consv Music	5,765	6,765	0
Saint Louis U	6,120	6,500	0
Saint Mary's C O'Fallon	3,232	3,336	0
Sch of the Ozarks	3,080	3,100	0
Southeast Missouri St U	1,105	1,210	1,120
Southwest Baptist U	4,070	4,340	0
Southwest Missouri St U	1,200	1,248	1,248
State Fair CC	402	426	942
Stephens C	7,500	8,400	0
Tarkio C	5,070	5,070	0
Three Rivers CC*	660	660	780
Trenton JC	560	620	810
U of Missouri			
Columbia	1,488	1,570	2,976
Kansas City	1,575	1,680	2,976
Rolla	1,718	1,822	2,976
St Louis	1,520	1,614	2,976
Washington U	10,606	11,512	0
Webster U	5,190	5,600	0
Westminster C	5,600	6,100	0
William Jewell C	4,940	5,530	0
William Woods C	6,130	6,500	0

MONTANA

	1986-87	1987-88	
	Tuition and fees	Tuition and fees	Added out-of-state tuition
Blackfeet CC	$ 810	$ 935	$ 0
Carroll C	4,060	4,302	0
C of Great Falls	3,540	3,580	0
Dawson CC	450	486	450
Dull Knife Memorial C	615	615	0
Flathead Valley CC*	450	552	504
Little Big Horn C	705	705	0
Miles CC	501	531	450
Rocky Mountain C	4,420	4,890	0
Salish Kootenai C	957	1,063	0
Western Montana C*	1,170	1,290	1,600

NEBRASKA

	1986-87	1987-88	
	Tuition and fees	Tuition and fees	Added out-of-state tuition
Bellevue C	1,620	2,050	0
Bishop Clarkson C			
of Nursing	2,999	2,431	0
Central CC	720	750	375
Chadron St C	1,076	1,121	630
C of Saint Mary	5,140	5,450	0
Concordia Teachers C	4,820	5,090	0
Creighton U	5,624	6,126	0
Dana C	5,310	5,660	0
Doane C	5,620	6,120	0
Grace C of the Bible	3,120	3,120	0
Hastings C	5,710	6,160	0
Kearney St C	1,079	1,169	630
McCook CC	620	650	135
Metro Tech CC	788	788	0
Midland Lutheran C	5,500	5,950	0
Nebraska Christian C	1,700	1,980	0
Nebraska Indian CC*	960	960	0
Nebraska Wesleyan U	5,610	5,977	0
Nebraska Western C	700	780	30
Northeast Tech CC	683	711	225
Peru St C	1,070	1,142	630
Southeast CC			
Beatrice	747	786	252
Lincoln	720	759	252
Milford	723	762	252
Union C	6,380	6,380	0
U of Nebraska			
Lincoln	1,524	1,565	2,302
Medical Center	1,420	1,455	2,302
Omaha	1,373	1,381	2,182
Wayne St C	1,090	1,151	630
York C	3,190	3,480	0

NEVADA

	1986-87	1987-88	
	Tuition and fees	Tuition and fees	Added out-of-state tuition
Clark County CC	615	615	2,200
Northern Nevada CC	600	600	2,200
Sierra Nevada C	2,640	3,100	0
Truckee Meadows CC	660	660	2,200
U of Nevada			
Las Vegas	1,080	1,080	2,200
Reno	1,080	1,080	2,200

NEW HAMPSHIRE

	1986-87	1987-88	
	Tuition and fees	Tuition and fees	Added out-of-state tuition
Castle JC	2,700	2,910	0
Colby-Sawyer C	8,600	9,100	0
Daniel Webster C	7,400	7,900	0

NEW HAMPSHIRE—Continued

	1986-87	1987-88	
	Tuition and fees	Tuition and fees	Added out-of-state tuition
Dartmouth C	$11,679	$12,474	$ 0
Franklin Pierce C	7,610	7,985	0
Hawthorne C	6,750	7,090	0
Hesser C	4,030	4,480	0
New England C	7,550	8,300	0
New Hampshire C	7,272	7,704	0
New Hampshire Tech Inst	1,600	1,600	2,450
NH Voc-Tech Cs			
Berlin	1,480	1,480	2,400
Claremont	1,485	1,485	2,400
Laconia	1,500	1,500	2,400
Manchester	1,485	1,485	2,400
Nashua	1,495	1,495	2,400
Stratham	1,487	1,495	2,400
Notre Dame C	4,720	5,350	0
Rivier C	5,430	5,990	0
Saint Anselm C	6,960	7,550	0
U Sys of New Hampshire			
U of New Hampshire	2,629	2,754	4,580
Keene St C	1,900	2,020	3,000
Plymouth St C	1,894	1,936	3,000
Sch Lifelong Learning	1,820	2,030	0
Manchester	1,580	1,800	2,870
White Pines C	4,300	4,600	0

NEW JERSEY

	1986-87	1987-88	
	Tuition and fees	Tuition and fees	Added out-of-state tuition
Assumption C for Sisters	1,200	1,200	0
Atlantic CC	961	1,065	2,670
Bergen CC	1,009	1,054	2,592
Berkeley Sch	5,575	5,950	0
Beth Medrash Govoha	2,750	2,900	0
Bloomfield C	5,770	6,070	0
Burlington County C	935	935	2,200
Caldwell C	5,495	6,150	0
Camden County C*	812	814	60
Centenary C	5,960	6,500	0
C of Saint Elizabeth	6,250	6,650	0
County C of Morris	966	966	2,128
Cumberland County C	930	1,030	2,670
Don Bosco C	3,010	3,010	0
Drew U	10,075	11,271	0
Fairleigh Dickinson U			
Edward Williams C	5,249	5,885	0
Florham Park-Madison	6,336	6,806	0
Rutherford	6,336	6,806	0
Teaneck	6,336	6,806	0
Felician C	4,350	5,000	0
Georgian Court C	4,930	5,330	0
Glassboro St C	1,521	1,680	600
Hudson County C*	880	880	780
Jersey City St C	1,575	1,718	600
Kean C of New Jersey	1,500	1,590	600
Mercer County CC	840	980	1,900
Monmouth C	6,882	7,368	0
Montclair St C	1,526	1,703	660
Northeastern Bible C	4,200	4,890	0
Ocean County C	948	1,024	890
Princeton U	11,780	12,550	0
Rabbinical C of America	3,500	3,500	0
Ramapo C of NJ	1,533	1,755	600
Rider C	6,910	7,560	0
Rutgers U			
Camden C	2,177	2,455	2,130
Nursing	2,147	2,431	2,130
Engineering	2,450	2,789	2,364
Pharmacy	2,348	2,653	2,248
Cook C	2,361	2,667	2,248

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2
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REPORT 2
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NEW JERSEY—Continued

	1986-87	1987-88	
	Tuition and fees	Tuition and fees	Added out-of-state tuition
Rutgers U			
Douglass C	$2,258	$2,548	$2,130
Livingston C	2,276	2,579	2,130
Mason Gross	2,246	2,535	2,130
Newark C	2,154	2,436	2,130
Rutgers C	2,272	2,582	2,130
Saint Peter's C	5,027	5,387	0
Seton Hall U	6,200	6,770	0
Somerset County C	938	1,024	2,570
Stevens Inst of Tech	11,800	10,550	0
Stockton State C	1,515	1,605	600
Talmudical Acad NJ	2,900	3,100	0
Trenton St C	1,620	1,764	600
Union County C*	875	875	2,250
Upsala C	6,800	7,475	0
Westminster Choir C	7,160	8,190	0
William Paterson C	1,476	1,656	600

NEW MEXICO

C of Santa Fe	3,988	5,350	0
C of the Southwest	1,226	2,080	0
Eastern New Mexico U			
Main campus	895	1,030	2,634
Roswell	484	508	864
Inst of American Indian Arts*	2,250	2,250	0
New Mexico Highlands U	725	827	2,629
NM Inst Mining & Tech	912	1,032	2,856
New Mexico JC	280	380	480
New Mexico Military Inst	1,105	1,105	1,150
New Mexico St U			
Alamogordo	452	478	864
Grants	432	456	864
Northern NM CC*	416	416	664
San Juan C	360	360	240
St John's C	9,720	10,350	0
U of New Mexico			
Main campus	1,020	1,152	3,222
Gallup	414	444	864

NEW YORK

Adelphi U	6,880	7,372	0
Albany Business C	3,800	4,000	0
Albany C Pharmacy	4,830	5,400	0
Alfred U	9,089	9,971	0
American Acad McAllister Inst of Funeral Service	3,400	3,750	0
American Acad Dramatic Arts	4,225	4,600	0
Bard C	11,850	12,398	0
Barnard C	11,348	12,104	0
Betzer Yeshiva Machzikei Torah Sem	2,350	2,350	0
Berkeley Sch of Long Island	5,550	5,925	0
Berkeley Sch Westchester	5,550	6,300	0
Berkeley Sch New York City	5,500	5,925	0
Beth Hatalmud Rabbinical C	2,500	2,500	0
Beth Jacob Hebrew Teachers C	2,580	2,780	0
Beth Medrash Emek Halacha Rabbinical C	2,600	2,600	0
Bnos Jerusalem Sem	2,350	2,350	0
Boricua C	4,127	4,227	0
Bramson ORT Tech Inst	3,400	3,400	0
Briarcliffe C of Business	4,575	5,205	0
Bryant & Stratton Business Inst Syracuse	3,795	3,645	0
Bryant & Stratton Business Inst Buffalo	3,820	4,036	0
Bryant & Stratton Business Inst Rochester	3,820	3,645	0
Canisius C	5,855	6,315	0
Cathedral C of the Immaculate Conception	4,000	4,400	0
Cazenovia C	5,850	6,102	0
Central City Business Inst	3,005	3,470	0
Central Yeshiva Tomchei Tmimmin Lubavitz of US	3,600	4,000	0
City U of New York			
Baruch C	1,319	1,323	1,300
Borough of Manhattan CC*	1,305	1,305	800
Bronx CC	1,295	1,325	800
Brooklyn C	1,301	1,352	1,300
City C	1,321	1,333	1,300
C of Staten Island	1,329	1,344	1,300
Hostos CC	1,249	1,250	800
Hunter C	1,341	1,342	1,300
John Jay C	1,316	1,316	1,300
Kingsboro CC	1,295	1,315	800
La Guardia CC	1,306	1,287	800
Lehman C	1,301	1,302	1,300
Medgar Evers C	1,276	1,277	800
New York City Tech C	1,298	1,299	1,300
Queens C	1,422	1,432	1,300
Queensborough CC	1,290	1,290	800
York C	1,305	1,322	1,300
Clarkson U	9,020	9,720	0
Cochran Sch Nursing	4,144	6,725	0
Colgate U	10,680	11,395	0
C for Human Services	5,520	6,000	0
C of Aeronautics	3,598	4,400	0
C of Insurance	5,420	5,760	0
C of Mount Saint Vincent	6,150	6,700	0
C of New Rochelle	6,450	7,200	0
C of New Resources	3,810	3,990	0
C of Saint Rose	5,670	6,140	0
Columbia U			
Columbia C	11,320	12,170	0
Engr & Applied Science	11,248	11,986	0
General Studies	10,374	11,080	0
Nursing	11,510	12,120	0
Concordia C	5,190	5,680	0
Cooper Union	300	300	0
Cornell U	11,500	12,300	0
Culinary Inst of America	7,091	7,276	0
D'Youville C	5,680	6,120	0
Daemen C	5,930	6,320	0
Darkei No'am Rabbinical C	2,700	3,000	0
Dominican C of Blauvelt	4,070	4,470	0
Dowling C	4,675	5,220	0
Eastman Sch of Music	9,923	10,775	0
Elizabeth Seton C	4,700	5,190	0
Elmira C	7,350	7,600	0
Eugene Lang C-New Sch For Social Research	7,414	7,724	0
Five Towns C	3,950	4,250	0
Fordham U	6,950	7,800	0
Friends World C	5,700	6,000	0
Hamilton C	10,900	11,700	0
Hartwick C	8,700	9,450	0
Hilbert C	4,088	4,378	0
Hobart C	10,670	11,450	0
Hofstra U	6,770	7,240	0

NEW YORK—Continued

	1986-87	1987-88	
	Tuition and fees	Tuition and fees	Added out-of-state tuition
Holy Trinity Orthodox Seminary	$ 800	$ 800	$ 0
Houghton C	5,901	6,270	0
Inst of Design and Construction	2,130	2,460	0
Interboro Inst	3,550	4,200	0
Iona C	5,610	6,050	0
Ithaca C	7,646	8,500	0
Jamestown Business C	3,340	3,615	0
Jewish Theol Seminary	4,110	4,504	0
Juilliard Sch	6,660	7,450	0
JC of Albany	4,420	4,620	0
Katharine Gibbs Sch Melville	6,020	6,020	0
Katharine Gibbs Sch New York	6,045	6,045	0
Kehilath Yakov Rabbinical Seminary	3,200	3,700	0
Keuka C	6,300	6,410	0
King's C	5,850	6,240	0
Kol Yaakov Torah Center	2,400	2,800	0
Laboratory Inst of Merchandising	5,860	6,520	0
Le Moyne C	6,235	6,605	0
Long Island C Hospital Sch of Nursing	2,850	3,132	0
Long Island U			
Brooklyn	6,360	6,815	0
C W Post	6,450	7,370	0
Southampton*	6,960	7,312	0
Machzikei Hadath Rabbinical C	4,000	4,000	0
Manhattan C	6,300	7,250	0
Manhattan Sch of Music	6,700	7,750	0
Manhattanville C	8,500	9,100	0
Mannes C of Music	6,100	7,100	0
Maria C	2,930	3,050	0
Maria Regina C	3,170	3,390	0
Marist C	6,344	6,784	0
Marymount C	6,930	7,340	0
Marymount Manhattan C	5,900	6,630	0
Mater Dei C	3,168	3,351	0
Medaille C	4,890	5,250	0
Mercy C	4,290	4,950	0
Mesivta Eastern Pkwy	3,500	3,500	0
Mesivta Tifereth Jerusalem	1,550	1,550	0
Mesivta Torah Vodaath Seminary	2,315	2,315	0
Mirrer Yeshiva Central Inst	2,000	3,000	0
Molloy C	4,850	6,030	0
Monroe Business Inst	4,095	4,980	0
Mount Saint Mary C	5,120	5,300	0
Nazareth C of Rochester	5,760	6,252	0
New York Inst Tech	4,990	5,370	0
NY Sch Interior Design	5,930	5,930	0
New York U	9,850	11,130	0
Niagara U	6,300	6,560	0
Nyack C	5,433	5,791	0
Olean Business Inst	2,700	3,035	0
Pace U			
New York	5,968	6,110	0
Pleasantville	5,968	6,110	0
White Plains	5,968	6,110	0
Parsons Sch of Design	8,054	8,670	0
Paul Smith's C of Arts and Sciences	5,440	5,820	0
Plaza Business Inst	3,975	3,975	0
Polytechnic U	9,340	10,040	0
Polytechnic U Long Island Center	9,340	10,040	0
Pratt Inst	8,150	8,436	0
Rabbinical Acad Mesivta Rabbi Chaim Berlin	2,900	3,400	0
Rabbinical C Beth Shraga	2,350	2,350	0
Rabbinical C Bobover Yeshiva B'nei Zion	2,800	3,200	0
Rabbinical C Ch'san Sofer of NY	2,800	3,200	0
Rabbinical C of Long Island	3,500	3,500	0
Rabbinical Seminary Adas Yereim	3,000	3,000	0
Rabbinical Seminary M'kor Chaim	2,400	2,400	0
Rabbinical Seminary of America	3,000	3,000	0
Rensselaer Poly Inst	11,130	11,650	0
Rika Breur Teachers Sem	1,080	1,070	0
Roberts Wesleyan C	5,934	6,646	0
Rochester Business Inst	3,725	3,485	0
Rochester Inst of Tech	7,851	8,406	0
Russell Sage C	7,350	7,750	0
Saint Bonaventure U	6,115	6,710	0
Saint Francis C	4,410	4,650	0
Saint John Fisher C	6,303	6,800	0
Saint John's U	5,200	5,500	0
Saint Joseph's C			
New York	4,330	4,630	0
Suffolk	4,340	4,640	0
Saint Lawrence U	10,280	11,445	0
Saint Thomas Aquinas C	4,225	4,500	0
Sarah Lawrence C	11,625	12,375	0
Sch of Visual Arts	6,880	8,080	0
Sh'or Yoshuv Rabbinical C	3,000	3,300	0
Siena C	6,005	6,385	0
Skidmore C	10,787	11,530	0
St U of New York			
Albany	1,475	1,478	1,850
Binghamton	1,501	1,506	1,850
Buffalo	1,484	1,486	1,850
Stony Brook	1,485	1,501	1,850
Empire St C	1,387	1,408	1,850
C at Brockport	1,475	1,475	1,850
C at Buffalo	1,465	1,465	1,850
C at Cortland	1,478	1,480	1,850
C at Fredonia	1,487	1,487	1,850
C at Geneseo	1,475	1,475	1,850
C at New Paltz	1,475	1,477	1,850
C at Old Westbury	1,425	1,445	1,850
C at Oneonta	1,468	1,504	1,850
C at Oswego	1,470	1,475	1,850
C at Plattsburgh	1,475	1,480	1,850
C at Potsdam	1,475	1,475	1,850
C at Purchase	1,475	1,495	1,850
Health Sci Ctr Brooklyn	1,465	1,465	1,850
Health Sci Ctr Syracuse	1,430	1,440	1,850
Health Sci Ctr Stony Brook	1,495	1,490	1,850
A&T C at Alfred	1,485	1,485	1,850
A&T C at Canton	1,495	1,495	1,850
A&T C at Cobleskill	1,478	1,498	1,850
A&T C at Delhi	1,485	1,485	1,850
A&T C at Farmingdale	1,500	1,607	1,850
A&T C at Morrisville	1,805	1,805	1,850
C of Environmental Science and Forestry	1,440	1,440	1,850
Maritime C	1,606	1,615	1,850
C of Tech Utica-Rome	1,475	1,475	1,850
Fashion Inst of Tech	1,500	1,500	1,350
Adirondack CC	1,187	1,250	1,150

NEW YORK—Continued

	1986-87	1987-88	
	Tuition and fees	Tuition and fees	Added out-of-state tuition
St U of New York			
Broome CC	$1,136	$1,240	$1,150
Cayuga County CC	1,300	1,412	1,310
Clinton CC	1,187	1,247	1,150
Columbia-Greene CC	1,254	1,256	1,180
CC of the Finger Lakes	1,406	1,464	1,344
Corning CC	1,420	1,450	1,350
Dutchess CC	1,315	1,415	1,350
Erie CC			
City	1,240	1,340	1,280
North	1,240	1,340	1,280
South	1,240	1,340	1,280
Fulton-Montgomery CC	1,233	1,368	1,275
Genesee CC	1,280	1,301	1,300
Hudson Valley CC	1,265	1,279	1,370
Jamestown CC	1,300	1,400	1,300
Jefferson CC	1,425	1,455	1,350
Monroe CC	1,362	1,432	1,350
Mohawk Valley CC	1,341	1,387	1,300
Niagara County CC	1,190	1,190	1,130
Nassau CC	1,400	1,440	1,350
North Country CC	1,355	1,430	1,325
Onondaga CC	1,364	1,414	2,700
Orange County CC	1,337	1,385	1,300
Rockland CC	1,176	1,275	1,200
Schenectady County CC	1,285	1,293	1,190
Suffolk County CC	1,398	1,448	1,340
Sullivan County CC	1,500	1,510	1,350
Tompkins-Cortland CC	1,345	1,370	1,275
Ulster County CC	1,375	1,375	1,300
Westchester CC	1,434	1,493	2,025
Syracuse U			
Main campus	8,390	8,970	0
Utica C	6,975	7,640	0
Talmudical Inst of Upstate New York	2,200	2,200	0
Talmudical Seminary Oholei Torah	4,000	4,000	0
Taylor Business Inst	5,525	6,000	0
Tech Career Inst	4,540	5,536	0
Tobe-Coburn Sch of Fashion Careers	7,070	7,600	0
Touro C	4,410	4,350	0
Trocaire C	3,550	3,800	0
Union C	10,338	11,103	0
United Talmudical Acad	2,800	2,800	0
U of Rochester	10,599	11,456	0
U of St of NY Regents C Degrees*	250	250	0
Utica Sch of Commerce	3,280	3,280	0
Vassar C	10,548	10,480	0
Villa Maria C of Buffalo	3,690	4,090	0
Wadhams Hall Sem C	2,795	2,995	0
Wagner C	6,730	6,930	0
Wells C	9,230	9,780	0
Wendell Castle Sch	6,500	7,000	0
Westchester Bus Inst	5,550	6,045	0
William Smith C	10,800	11,465	0
Wood School	5,800	6,125	0
Yeshiva Bnei Torah	2,200	2,200	0
Yeshiva Karlin Stolin Inst	2,500	4,000	0
Yeshiva of Nitra Rabbinical C	2,800	2,800	0
Yechiva Ohel Shmuel	2,350	2,500	0

NEW YORK—Continued

	1986-87	1987-88	
	Tuition and fees	Tuition and fees	Added out-of-state tuition
Yeshiva Shaar Hatorah	$2,450	$2,450	$ 0
Yeshiva U	7,450	7,940	0
Yeshivat Mikdash Melech	3,500	3,500	0

NORTH CAROLINA

Anson Tech C	213	242	1,881
Asheville Buncombe Tech C	216	246	1,881
Atlantic Christian C	4,300	4,540	0
Barber-Scotia C	3,030	3,230	0
Beaufort County CC	203	243	1,881
Belmont Abbey C	4,687	5,186	0
Bennett C	3,800	4,265	0
Bladen Tech C	219	246	1,881
Blanton's JC	2,525	2,375	0
Blue Ridge Tech C	210	241	1,881
Brevard C	3,670	3,900	0
Brunswick Tech C*	219	253	1,881
Caldwell CC	213	240	1,881
Campbell U	5,202	5,636	50
Cape Fear Tech Inst	213	240	1,881
Carteret Tech C	211	238	1,881
Catawba C	5,200	5,600	0
Catawba Valley Tech C	216	243	1,881
Cecils JC	2,485	2,585	0
Central Carolina Tech C	216	243	1,881
Central Piedmont CC	204	231	1,881
Chowan C	3,400	3,650	0
Cleveland Tech C	219	249	1,881
Coastal Carolina CC	213	240	1,881
C of the Albemarle	226	253	1,881
Craven CC	225	252	1,881
Davidson C	8,380	9,405	0
Davidson County CC	221	248	1,881
Duke U	9,485	10,320	0
Durham Tech CC	213	234	1,881
East Coast Bible C	2,140	2,350	0
Edgecombe Tech C	207	234	1,881
Elon C	4,246	4,950	0
Fayetteville Tech Inst	207	234	1,881
Forsyth Tech C	213	240	1,881
Gardner-Webb C	4,530	4,930	0
Gaston C*	234	261	1,881
Guilford C	6,060	6,958	0
Guilford Tech CC*	230	258	1,881
Halifax CC	213	246	1,881
Hardbarger JC of Bus	2,434	2,425	0
Haywood Tech C	213	245	1,881
High Point C	4,530	4,900	0
Isothermal CC	226	253	1,881
James Sprunt Tech C	222	249	1,881
John Wesley C	2,026	2,650	0
Johnson C Smith U	3,551	3,870	0
Johnston Tech C	219	246	1,881
Lees-McRae C	3,644	4,010	0
Lenoir CC	225	252	1,881
Lenoir-Rhyne C	5,201	5,940	0
Livingstone C	3,140	3,140	0
Louisburg C	3,770	4,175	0
Mars Hill C	4,490	4,840	0
Martin CC	213	240	1,881
Mayland Tech C	216	243	1,881
McDowell Tech C	216	244	1,881
Meredith C	4,200	4,350	0

NORTH CAROLINA—Continued

	1986-87	1987-88	
	Tuition and fees	Tuition and fees	Added out-of-state tuition
Methodist C	$5,200	$5,70[illegible]	$ 0
Mitchell CC	225	252	1,881
Montgomery Tech C	210	248	1,881
Montreat-Anderson C	3,298	3,500	0
Mount Olive C	4,000	4,200	0
Nash Tech C	207	234	1,881
NC Wesleyan C	4,940	5,350	0
Pamlico Tech C	213	240	1,881
Peace C	3,190	3,390	0
Pfeiffer C	4,680	5,030	0
Piedmont Bible C	2,700	2,800	0
Piedmont Tech C	218	247	1,881
Pitt CC	216	243	1,881
Queens C	5,650	6,150	0
Randolph Tech C	220	247	1,881
Richmond Tech Inst	225	252	1,881
Rornoke Bible C	1,462	1,637	0
Roanoke-Chowan Tech C	209	243	1,881
Robeson Tech C	216	243	1,881
Rockingham CC	225	252	1,881
Rowan Tech C	219	246	1,881
Rutledge C Charlotte*	3,105	3,312	0
Rutledge C Durham	3,105	3,295	0
Rutledge C Raleigh*	3,105	3,105	0
Rutledge C Fayetteville	3,105	3,105	0
Rutledge C Greensboro*	3,105	3,105	0
Sacred Heart C	3,910	4,378	0
Saint Andrews Presbyterian C	6,154	6,575	0
Saint Augustine's C	3,300	3,300	0
Saint Mary's C	4,750	5,095	0
Salem C	6,200	6,920	0
Sampson Tech C	225	252	1,881
Sandhills CC	222	249	1,881
Shaw U	2,780	4,355	0
Southeastern CC	227	251	1,881
Southwestern Tech C	216	245	1,881
Stanly Tech C	216	243	1,881
Surry CC	216	243	1,881
Tech C of Alamance	162	243	1,881
Tri-County CC	204	231	1,881
U of North Carolina			
Asheville*	796	820	3,054
Chapel Hill*	819	819	3,340
Vance-Granville CC	213	240	1,881
Wake Forest U	6,600	7,250	0
Wake Tech C	207	234	1,881
Warren Wilson C	5,750	6,250	0
Wayne CC	207	243	1,881
Western Carolina U*	894	934	3,248
Western Piedmont CC	216	248	1,881
Wilkes CC	224	245	1,881
Wilson County Tech C	213	240	1,881
Wingate C	3,670	3,870	0
Winston-Salem St U*	931	811	2,965

NORTH DAKOTA

Dickinson St U*	1,143	1,243	1,332
Fort Berthold CC	1,260	1,560	0
Jamestown C	5,700	5,720	0
Little Hoop CC	1,350	1,490	0
Mayville St U*	1,143	1,238	1,332

Continued on Following Page

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Tuition and Fees *Continued from Preceding Page*

NORTH DAKOTA—Continued

	1986-87 Tuition and fees	1987-88 Tuition and fees	1987-88 Added out-of-state tuition
Minot St U	$1,098	$1,197	$1,203
Standing Rock CC	950	1,270	0
Trinity Bible C	2,658	2,868	0
Turtle Mountain CC	936	936	0
U of Mary	3,970	4,350	0

OHIO

	1986-87 Tuition and fees	1987-88 Tuition and fees	1987-88 Added out-of-state tuition
ATES Tech Inst	3,520	3,520	0
Antioch C	8,420	9,420	0
Antonelli Inst of Art and Photography	4,550	4,980	0
Art Acad of Cincinnati	4,370	4,825	0
Ashland C	7,080	7,506	0
Baldwin-Wallace C	6,858	7,260	0
Belmont Tech C	750	750	150
Bluffton C	5,715	5,985	0
Borromeo C of Ohio	3,800	3,800	0
Bowling Green St U*	2,028	2,082	2,470
Bryant Stratton Bus Inst	3,820	3,820	0
Capital U	7,420	7,980	0
Case Western Reserve U	9,470	10,400	0
Cedarville C	3,972	4,218	0
Central St U	1,413	1,728	1,599
Chatfield C	2,250	2,550	0
Cincinnati Bible Sem	2,404	2,720	0
Cincinnati C of Mortuary Science	3,980	4,200	0
Cincinnati Tech C*	1,650	1,700	990
Circleville Bible C	2,850	5,795	0
Cleveland C of Jewish Studies	1,500	1,500	0
Cleveland Inst of Art	6,250	6,800	0
Cleveland Inst of Electronics	1,500	1,500	0
Cleveland Inst of Music	7,998	8,438	0
C of Mount Saint Joseph on-the-Ohio	5,322	5,704	0
C of Wooster	9,220	9,840	0
Columbus C Art & Design	5,880	6,000	0
Columbus St CC	1,260	1,260	1,584
Cuyahoga CC District			
Eastern	945	1,080	1,575
Metro	988	1,080	1,575
Western	988	1,080	1,575
Davis JC of Business	3,548	3,748	0
Defiance C	5,270	5,590	0
Denison U	9,800	10,440	0
DeVry Inst of Tech	3,846	3,990	0
Dyke C	3,680	3,830	0
Edison St CC*	945	945	855
Electronic Tech Inst	3,720	4,200	0
Findlay C	5,919	6,329	0
Franciscan U of Steubenville	5,220	5,420	0
Franklin U	2,830	2,950	0
God's Bible Sch and C	1,785	2,173	0
Heidelberg C	8,200	8,670	0
Hiram C	8,404	8,935	0
Hocking Tech C*	1,170	1,170	1,170
Jefferson Tech C*	675	675	630
John Carroll U	5,460	6,304	0
Kent St U Trumbull	1,791	1,938	2,000
Kenyon C	10,352	11,017	0
Kettering C of Med Arts	2,510	2,600	0
Lake Erie C	6,470	6,840	0
Lorain County CC	1,148	1,193	2,160
Lourdes C	2,930	3,700	0
Malone C	5,370	5,835	0
Marietta C	8,050	8,810	0
Marion Tech C	1,188	1,296	1,656
Miami-Jacobs JC of Bus	3,000	3,000	0
Mount Union C	8,130	8,660	0
Mount Vernon Nazarene C	4,126	4,384	0
Muskingum Area Tech C	1,080	1,350	1,200
Muskingum C	8,100	8,655	0
North Central Tech C*	1,470	1,470	1,281
Northwest Tech C*	1,170	1,170	1,080
Northwestern Business C	1,720	2,475	0
Notre Dame C	4,410	4,660	0
Oberlin C	11,007	11,864	0
Ohio C Business & Tech	3,300	3,325	0
Ohio Northern U	6,540	7,995	0
Ohio U			
Main campus*	2,060	2,172	2,205
Lancaster	1,668	1,668	2,100
Ohio Wesleyan U	8,525	9,200	0
Otterbein C	7,155	7,656	0
Owens Tech C	984	1,056	900
Pontifical C Josephinum	2,578	2,578	0
RETS Tech Center	3,880	3,880	0
Rio Grande C and CC	1,185	1,200	2,800
Shawnee St U	1,104	1,269	300
Southern Ohio C	3,260	4,100	0
Southern St CC	1,103	1,152	990
Stark Tech C	1,296	1,475	900
Terra Tech C*	1,122	1,122	1,218
Tiffin U	3,650	4,080	0
Union for Experimenting C's and U's	4,450	4,900	0
U of Cincinnati			
Main campus	2,091	2,259	3,129
Clermont	2,091	2,259	3,129
Raymond Walters	2,091	2,259	3,129
U of Dayton	5,740	6,290	0
Urbana U	4,985	5,391	0
Ursuline C	4,200	4,800	0
Virginia Marti C of Fashion and Art	4,950	5,250	0
Walsh C	4,440	4,656	0
Washington Tech C*	990	990	720
West Side Inst of Tech	7,000	7,000	0
Wilberforce U	4,000	4,370	0
Wilmington C	6,186	6,550	0
Wittenberg U	9,143	9,856	0
Wright St U			
Main campus	1,752	1,896	1,896
Lake	1,509	1,098	1,896
Xavier U	5,900	6,450	0

OKLAHOMA

	1986-87 Tuition and fees	1987-88 Tuition and fees	1987-88 Added out-of-state tuition
Bacone C	1,920	2,265	0
Bartlesville Wesleyan C	4,200	4,500	0
Cameron U	660	765	1,329
Carl Albert JC	495	586	1,125
Central St U	622	727	1,329
Connors St C	510	618	1,125
Eastern Oklahoma St C	540	618	1,125
El Reno JC	510	618	1,125
Flaming Rainbow U	3,230	3,230	0
Hillsdale Free Will Baptist C*	1,850	2,000	0
Langston U	735	812	1,329
Mid-America Bible C	3,332	3,700	0
Murray St C	525	603	1,125
National Ed Ctr-Spartan Sch of Aeronautics	6,460	7,080	0

OKLAHOMA—Continued

	1986-87 Tuition and fees	1987-88 Tuition and fees	1987-88 Added out-of-state tuition
Northeastern St U	$ 626	$ 758	$1,329
Northern Oklahoma C	465	558	1,125
Northwestern Okla St U	630	730	1,329
Oklahoma Baptist U	3,170	3,356	0
Oklahoma Christian C	3,044	3,300	0
Oklahoma City CC	495	618	1,125
Oklahoma City U	3,772	3,980	0
Okla JC Business & Tech	2,580	2,580	0
Okla Panhandle St U	696	811	1,329
Oklahoma St U Tech Oklahoma City	705	744	2,004
Oral Roberts U	4,480	4,880	0
Phillips U	4,246	4,684	0
Rogers St C	525	633	1,125
Rose St C	458	546	1,125
Saint Gregory's C	2,575	2,725	0
Seminole JC	510	603	1,125
Southern Nazarene U	3,580	3,950	0
Southwestern C of Christian Ministries	2,250	2,320	0
Southwestern Okla St U	611	716	1,329
U of Oklahoma	896	1,000	2,004
U Science & Arts of Okla	611	716	1,329
U of Tulsa	5,280	6,240	0
Western Oklahoma St C	495	573	1,125

OREGON

	1986-87 Tuition and fees	1987-88 Tuition and fees	1987-88 Added out-of-state tuition
Bassist C	5,350	5,400	0
Blue Mountain CC	612	648	1,620
Central Oregon CC	600	645	2,646
Chemeketa CC*	693	833	1,914
Clackamas CC	630	630	1,680
Clatsop CC	576	648	1,871
Columbia Christian c	4,320	4,636	0
Concordia C	5,865	5,965	0
Eastern Oregon St C*	1,422	1,456	0
Eugene Bible C	2,726	2,915	0
George Fox C	6,050	6,618	0
Lane CC*	708	708	1,947
Lewis and Clark C	8,740	9,348	0
Linfield C	7,480	7,970	0
Linn-Benton CC*	684	684	2,160
Marylhurst C	5,400	5,500	0
Mount Angel Seminary	2,730	3,030	0
Mount Hood CC	645	675	2,565
Multnomah Sch of the Bible	3,920	4,070	0
NW Christian C	4,264	4,585	0
Oregon Inst of Tech	1,487	1,536	2,785
Oregon Polytech Inst	3,436	3,645	0
Oregon St U*	1,470	1,514	2,784
Pacific NW C of Art	4,950	5,090	0
Pacific U	7,310	7,835	0
Reed C	9,980	10,600	0
Rogue CC	720	720	1,692
SW Oregon CC*	600	660	1,320
Treasure Valley CC	660	660	660
U of Portland	6,240	6,900	0
Warner Pacific C	5,814	6,014	0
Western Baptist C	4,906	5,157	0
Willamette U	7,560	9,075	0

PENNSYLVANIA

	1986-87 Tuition and fees	1987-88 Tuition and fees	1987-88 Added out-of-state tuition
Acad of New Church	2,247	2,436	0
Albright C	8,345	9,070	0
Allegheny C	8,655	9,575	0
Allentown C St Francis	5,344	5,644	0
Alvernia C	3,750	4,348	0
American Inst Design	4,790	4,790	0
Antioch U Philadelphia	3,950	4,270	0
Antonelli Inst of Art and Photography	5,750	5,870	0
Art and Fashion Inst of Philadelphia	5,025	5,875	0
Art Inst of Pittsburgh	5,205	5,600	0
Baptist Bible C of Pa	4,480	4,654	0
Beaver C	7,200	7,800	0
Berean Inst	2,410	2,410	0
Bryn Mawr C	10,450	11,250	0
Bucknell U	10,755	11,605	0
Bucks County CC	1,144	1,256	2,464
Cabrini C	5,400	5,790	0
Carlow C	6,790	7,062	0
Carnegie Mellon U	10,310	11,160	0
Cedar Crest C	7,610	8,370	0
Central Penn Bus Sch	3,045	3,355	0
Chatham C	7,440	8,000	0
Chestnut Hill C	5,050	5,550	0
C Misericordia	4,880	5,290	0
Combs C of Music	5,275	5,175	0
CC of Allegheny County*	1,109	1,200	2,400
Curtis Inst of Music	100	125	0
Dean Inst of Tech	4,420	4,320	0
Delaware Valley C of Science & Agriculture	5,935	6,416	0
Dickinson C	10,285	11,335	0
Drexel U	7,221	8,094	0
Duquesne U	6,390	6,825	0
Eastern C	6,470	6,980	0
Electronic Inst Midtown	3,350	3,350	0
Electronic Inst Pittsburgh	3,200	3,200	0
Elizabethtown C	7,325	8,050	0
Erie Business Center	3,470	3,680	0
Franklin and Marshall C	10,200	11,400	0
Gannon U	5,150	5,650	0
Geneva C	5,360	5,710	0
Gettysburg C	9,425	10,840	0
Gratz C	1,050	1,250	0
Grove City C	3,470	3,600	0
Gwynedd-Mercy C	5,000	5,800	0
Harcum JC	4,400	4,775	0
Harrisburg Area CC	925	1,036	2,120
Haverford C	10,950	11,800	0
Holy Family C	4,400	4,990	0
Hussian Sch of Art	4,015	4,525	0
Immaculata C	4,500	5,000	0
Johnson Tech Inst	2,465	2,945	0
Juniata C	8,050	8,750	0
Keystone JC	5,095	5,730	0
King's C	5,680	5,940	0
La Roche C	4,760	5,060	0
La Salle U	6,200	6,700	0
Lackawanna JC	2,970	3,300	0
Lafayette C	9,950	10,850	0
Lancaster Bible C	4,630	4,940	0
Lebanon Valley C	7,450	8,150	0
Lehigh County CC*	1,185	1,245	2,820
Lehigh U	10,500	11,400	0
Lincoln Tech Inst	5,175	5,300	0
Lincoln U	2,130	2,130	800
Luzerne County CC	1,170	1,170	2,070
Lycoming C	7,380	7,880	0
Manor JC	4,173	4,840	0
Marywood C	4,450	5,050	0
McCarrie Sch Health Sci	3,508	3,508	0
Mercyhurst C	5,980	6,556	0

PENNSYLVANIA—Continued

	1986-87 Tuition and fees	1987-88 Tuition and fees	1987-88 Added out-of-state tuition
Messiah C	$5,730	$6,170	$ 0
Montgomery County CC	1,074	1,144	2,160
Moore C of Art	7,070	7,900	0
Moravian C	8,170	9,085	0
Mount Aloysius JC	4,980	5,290	0
Muhlenberg C	9,000	9,980	0
National Education Ctr Vale Tech Inst	5,502	5,790	0
Neumann C	4,950	5,460	0
NE Christian JC	3,710	3,920	0
Peirce JC	4,380	4,660	0
Penn Tech Inst	3,980	4,430	0
Pennco Tech	3,267	4,365	0
Pennsylvania Inst of Tech	4,593	4,755	0
Pennsylvania St U	2,986	3,292	3,318
Philadelphia C of the Bible	4,467	4,825	0
Philadelphia C of Pharmacy and Science	6,225	6,675	0
Philadelphia C of Textiles and Science	5,960	6,400	0
Pittsburgh Inst of Aeronautics	3,585	3,585	0
Pittsburgh Tech Inst	5,500	5,500	0
Point Park C	5,462	6,282	0
Reading Area CC	1,224	1,254	2,400
Robert Morris C	3,480	3,720	0
Rosemont C	6,295	6,728	0
Saint Charles Borromeo Seminary	3,050	3,050	0
Saint Francis C	6,000	6,290	0
Saint Joseph's U	6,100	6,800	0
Saint Vincent C	5,750	6,110	0
Sch of Hotel and Restaurant Mgmt	5,700	6,300	0
Seton Hill C	6,260	6,670	0
Spring Garden C	5,550	6,310	0
Susquehanna U	7,800	8,625	0
Swarthmore C	11,350	12,150	0
Talmudical Yeshiva of Philadelphia	2,250	2,600	0
Temple U	3,350	3,564	2,658
Thaddeus Stevens St Sch of Tech	2,870	2,935	0
Thiel C	6,602	7,200	0
Thomas Jefferson U	7,800	8,500	0
Tracey-Warner Sch	3,675	3,675	0
Triangle Tech	4,172	4,896	0
Triangle Tech Greensburg Center	4,125	4,542	0
United Wesleyan C	4,470	4,800	0
U of Pennsylvania	11,200	11,976	0
U of Pittsburgh			
Main campus	3,220	3,486	3,350
Bradford	3,220	3,480	3,350
Greensburg	3,130	3,380	3,350
Johnstown	3,180	3,430	3,350
Titusville	3,110	3,365	3,200
U of Scranton	5,640	5,890	0
Ursinus C	7,350	8,250	0
Valley Forge Christian C*	2,365	2,386	0
Valley Forge Military JC	5,430	6,610	0
Villa Maria C	5,380	6,015	0
Villanova U	7,385	8,250	0

PENNSYLVANIA—Continued

	1986-87 Tuition and fees	1987-88 Tuition and fees	1987-88 Added out-of-state tuition
Washington and Jefferson C	$8,220	$8,740	$ 0
Waynesburg C	5,790	6,078	0
Westminster C	6,480	7,080	0
Westmoreland Co CC	844	844	1,752
Widener U	7,200	7,860	0
Wilkes C	6,150	6,430	0
Wilson C	7,510	8,236	0
York C of Pennsylvania	3,496	3,716	0

RHODE ISLAND

	1986-87 Tuition and fees	1987-88 Tuition and fees	1987-88 Added out-of-state tuition
Brown U	12,036	12,676	0
Bryant C	5,800	6,650	0
CC of Rhode Island	844	900	0
Johnson and Wales C	5,670	6,285	0
New England Inst of Tech	5,055	5,280	0
Providence C	7,545	8,400	0
Rhode Island C	1,298	1,378	2,500
RI Sch of Design	9,705	10,430	0
Roger Williams C	6,814	7,240	0
Salve Regina Newport C	6,900	7,800	0
U of Rhode Island	2,125	2,231	3,807

SOUTH CAROLINA

	1986-87 Tuition and fees	1987-88 Tuition and fees	1987-88 Added out-of-state tuition
Aiken Tech C	600	600	285
Allen U	2,800	3,330	0
Anderson C	3,880	4,320	0
Baptist C Charleston	4,894	5,290	0
Beaufort Tech C	675	675	225
Benedict C	3,456	3,655	0
Bob Jones U	2,720	2,980	0
Central Wesleyan C	4,640	5,050	0
Chesterfield-Marlboro C	680	680	380
Citadel, Military C of SC	1,915	2,142	2,634
Claflin C	3,002	3,242	0
Clemson U*	1,922	2,086	2,777
Clinton JC	1,025	1,175	0
Coker C	5,680	6,052	0
C of Charleston*	1,780	1,780	1,400
Columbia Bible C	3,420	3,669	0
Columbia C	5,800	6,200	0
Columbia JC of Business	1,905	2,136	0
Converse C	6,250	6,900	0
Denmark Tech C	525	800	1,000
Erskine C	6,015	6,700	0
Florence-Darlington C*	910	910	500
Furman U	6,656	7,314	0
Greenville Tech C	465	558	396
Horry-Georgetown Tech C*	600	600	600
Lander C*	1,470	1,720	800
Limestone C	5,460	5,460	0
Medical U of SC	1,500	1,815	1,815
Midlands Tech C	750	750	750
Morris C	2,904	3,079	0
Newberry C	5,700	5,900	0
Nielsen Electronics Inst	1,809	1,809	0
North Greenville C	3,500	4,000	0
Orangeburg-Calhoun C*	570	570	300
Presbyterian C	6,257	6,757	0
Rutledge C*	3,105	3,312	0
Rutledge C Spartanburg*	3,105	3,105	0
Spartanburg Methodist C	3,500	3,700	0

SOUTH CAROLINA—Continued

	1986-87 Tuition and fees	1987-88 Tuition and fees	1987-88 Added out-of-state tuition
Spartanburg Tech C	$ 450	$ 450	$ 450
Sumter Area Tech C	614	614	342
Tri-County Tech C*	800	800	784
Trident Tech C	765	765	765
Voorhees C	2,740	2,900	0
Williamsburg Tech C	450	600	0
Winthrop C*	1,748	2,078	1,804
Wofford C	5,675	6,235	0
York Tech C*	396	396	396

SOUTH DAKOTA

	1986-87 Tuition and fees	1987-88 Tuition and fees	1987-88 Added out-of-state tuition
Augustana C	6,475	6,890	0
Black Hills St C	1,794	1,497	1,155
Dakota St C	1,454	1,502	1,155
Dakota Wesleyan U	4,170	4,555	0
Huron C	4,490	4,690	0
Kilian CC	3,015	3,427	0
Mount Marty C	4,570	4,935	0
National C	4,725	5,025	0
Northern St C	1,405	1,461	1,155
Oglala Lakota C	870	870	0
Presentation C	4,165	4,250	0
Sinte Gleska C	980	980	0
Sioux Falls C	4,950	5,280	0
SD Sch of Mines & Tech	1,713	1,674	1,365
South Dakota St U	1,628	1,605	1,365
U of South Dakota	1,542	1,632	1,365

TENNESSEE

	1986-87 Tuition and fees	1987-88 Tuition and fees	1987-88 Added out-of-state tuition
American Baptist C of ABT Seminary	1,500	1,650	0
Aquinas JC	2,360	2,360	0
Belmont C	3,350	3,750	0
Bethel C	3,150	3,300	0
Bristol C	2,850	2,850	0
Bryan C	4,250	4,650	0
Carson-Newman C	4,320	4,780	100
Christian Brothers C	4,840	5,290	0
Cooper Inst	2,610	2,710	0
Cumberland U	3,410	3,600	0
David Lipscomb C	3,485	3,584	0
Draughon's JC Memphis	2,630	2,900	0
Draughon's JC Nashville	2,700	2,700	0
Fisk U	4,315	4,315	0
Free Will Baptist Bible C	2,262	2,455	0
Freed-Hardeman C	3,340	3,560	0
Hiwassee C	2,490	2,670	0
John A Gupton C	2,750	2,935	0
Johnson Bible C	2,150	2,350	0
King C	4,050	4,500	0
Knoxville Business c	2,068	2,160	0
Knoxville C	3,407	4,580	0
Lambuth C	4,182	4,182	0
Lane C	3,049	3,540	0
Lee C	2,972	3,262	0
LeMoyne-Owen C	5,070	5,070	0
Lincoln Memorial U	3,045	3,430	0
Martin Methodist C	3,150	3,550	0
Maryville C	5,260	5,785	0
McKenzie C	3,048	3,168	0
Memphis C of Art	5,215	5,715	0
Mid-South Bible C	2,930	3,026	0
Milligan C	4,456	4,716	0

"I'd like to find a telecommunications operation that can offer more to our resident students without giving me more headaches.
I guess it will take something pretty comprehensive to accomplish that!"

IT TAKES A SYSTEM...BASED ON EXPERTISE

TENNESSEE—Continued

	1986-87	1987-88	
	Tuition and fees	Tuition and fees	Added out-of-state tuition
O'More C of Design	$4,600	$4,600	$ 0
Rhodes C	7,880	8,580	0
Rutledge C*	3,105	3,312	0
Southern C of Seventh-Day Adventists	5,536	5,500	0
St U and CC Sys of Tenn			
Austin Peay St U	1,152	1,227	2,604
East Tennessee St U	1,056	1,134	2,604
Memphis St U	1,220	1,296	2,604
Middle Tennessee St U	1,036	1,104	2,604
Tennessee St U	1,078	1,148	2,604
Tennessee Tech U	1,095	1,190	2,604
Chattanooga St CC	639	684	2,430
Cleveland St CC	642	687	2,430
Columbia St CC	636	685	2,430
Dyersburg St CC	636	681	2,430
Jackson St CC	642	687	2,430
Motlow St CC	642	687	2,430
Nashville St Tech Inst	636	681	2,430
Roane St CC	642	687	2,430
Shelby St CC	636	684	2,430
St Tech Inst Knoxville	642	687	2,430
St Tech Inst Memphis	639	684	2,430
Tri-Cities St Tech Inst	639	684	2,430
Volunteer St CC	639	687	2,430
Walters St CC	642	684	2,430
Tenn Inst of Electronics*	4,215	4,215	0
Tennessee Temple U	2,710	3,030	0
Tennessee Wesleyan C	3,746	4,074	0
Tomlinson C	2,750	2,888	0
Trevecca Nazarene C	3,963	4,040	0
Tusculum C	4,309	4,509	0
Union U	3,050	3,240	0
U of Tennessee			
Chattanooga	1,154	1,228	2,604
Knoxville	1,311	1,404	2,604
Martin	1,173	1,254	2,604
Memphis	1,134	1,203	2,604
U of the South	9,285	10,080	0
Vanderbilt U	9,675	10,725	0

TEXAS

	1986-87	1987-88	
	Tuition and fees	Tuition and fees	Added out-of-state tuition
Abilene Christian U	3,900	4,050	0
Alvin CC	284	284	1,110
Amarillo C*	419	419	1,208
Amber U	3,000	3,000	0
American Tech U	2,720	3,020	0
Angelina C	432	492	360
Angelo St U*	870	870	3,120
Arlington Baptist C	1,700	1,945	0
Austin C	5,995	6,475	0
Austin CC	618	526	2,550
Bauder Fashion C	4,710	4,910	0
Baylor C of Dentistry	1,200	1,300	0
Baylor U	3,970	4,490	0
Bee County C	280	300	3,360
Bishop C	3,154	2,796	0
Blinn C	534	606	1,560
Brazosport C	186	186	370
Central Texas C*	256	256	434
Cisco JC*	540	540	360
Clarendon C	250	350	400
C of the Mainland	135	135	606
Concordia Lutheran C	3,600	4,200	0
Cooke County C	415	445	360
Corpus Christi St U*	840	840	3,120
Criswell C of Bible Studies	2,145	2,145	0
Dallas Baptist U	4,300	4,330	0
Dallas Christian C	1,870	1,870	0
Del Mar C	384	384	3,700
DeVry Inst of Tech Irving	3,846	3,990	0
East Texas Baptist U	3,300	3,420	0
East Texas St U*	870	870	3,120
East Texas St U at Texarkana*	810	780	3,120
El Paso CC	628	810	2,710
Galveston C	292	292	360
Grayson County C*	480	480	1,170
Hardin-Simmons U	3,828	4,086	0
Houston Baptist U	3,654	3,804	0
Houston CC	750	750	1,580
Howard C	426	525	400
Howard Payne U	3,140	3,215	0
Huston-Tillotson C	3,300	3,650	0
Incarnate Word C	4,770	5,170	0
Jacksonville C	2,000	2,150	0
Jarvis Christian C	3,400	3,400	0
Kilgore C	300	300	870
Lamar U*	880	880	3,120
Laredo JC	384	484	910
Laredo St U*	705	810	3,120
Lee C*	294	294	980
LeTourneau C	4,854	5,354	0
Lon Morris C	2,900	3,880	0
Lubbock Christian U	4,046	4,470	0
McLennan CC	342	432	2,040
McMurry C	3,840	4,110	0
Midland C	372	372	560
Midwestern St U*	870	870	3,120
Miss Wade's Fashion C	3,090	3,090	0
Navarro C*	712	712	156
North Harris County C	222	280	480
North Texas St U*	896	896	3,120
Odessa C	558	400	240
Our Lady of the Lake U	4,460	4,790	0
Pan American U*	780	780	3,120
Panola JC	250	250	150
Paris JC	470	470	540
Paul Quinn C	2,496	2,496	0
Ranger JC*	480	480	250
Rice U	4,620	5,150	0
Saint Edward's U	4,980	5,514	0
Saint Mary's U	5,080	5,410	0
Saint Philip's C*	440	442	840
Sam Houston St U*	880	880	3,120
San Antonio C	440	440	840
San Jacinto C North*	330	330	980
San Jacinto C Central	350	310	980
Schreiner C	4,675	5,475	0
South Plains C	418	478	480
Southern Methodist U	7,879	8,392	0
Southwest Texas JC*	426	426	1,580
Southwest Texas St U*	902	902	3,120
SW Adventist C	5,500	5,882	0
SW Assemblies of God C	2,317	2,450	0
Southwestern Christian C	2,577	2,770	0
Southwestern U	5,900	6,400	0
Stephen F Austin St U*	850	850	3,120
Sul Ross St U*	880	880	3,120
Tarrant County JC	264	264	3,032
Temple JC	508	508	1,020
Texas A&I U*	840	840	3,120
Texas A&M U Sys			
Prairie View A&M U*	1,070	1,070	3,120
Tarleton St U*	886	886	3,120
Texas A&M U			
Main campus*	870	880	3,120
Galveston*	886	895	3,120
Texas Christian U	5,744	6,000	0
Texas C	2,580	2,970	0

TEXAS—Continued

	1986-87	1987-88	
	Tuition and fees	Tuition and fees	Added out-of-state tuition
Texas Lutheran C	$3,950	$4,400	$ 0
Texas Southern U*	884	884	3,120
Texas Southmost C*	459	526	1,200
Texas St Tech Inst			
Amarillo*	477	477	3,240
Harlingen*	477	477	3,240
Sweetwater*	477	477	3,240
Waco*	534	534	3,240
Texas Tech U*	862	870	3,120
Texas Wesleyan C	3,900	4,550	0
Texas Woman's U*	882	882	3,120
Trinity U	7,080	7,670	0
Trinity Valley CC*	336	336	1,560
Tyler JC*	260	260	810
U of Dallas	5,500	6,000	0
U of Houston			
U Park*	840	840	3,120
Clear Lake*	854	854	3,120
Downtown*	890	890	3,120
Victoria*	828	900	3,120
U of Mary Hardin-Baylor	3,400	3,450	0
U of Saint Thomas	3,680	4,090	0
U of Texas			
Arlington*	910	910	3,120
Austin*	858	858	3,120
Dallas*	870	870	3,120
El Paso*	816	816	3,120
San Antonio*	840	840	3,120
Tyler*	840	850	3,120
Permian Basin*	816	816	3,120
Sch of Allied Health Sciences at Dallas*	600	600	3,120
Sch of Allied Health Sciences at Galveston*	654	654	3,120
Sch of Nursing at Galveston*	680	680	3,120
Vernon Regional JC	350	400	200
Victoria C	300	300	1,080
Wayland Baptist U	3,188	3,188	0
Weatherford C	350	410	2,400
West Texas St U*	862	862	3,120
Western Texas C*	480	480	240
Wharton County JC	555	570	960
Wiley C	2,982	3,500	0

UTAH

	1986-87	1987-88	
	Tuition and fees	Tuition and fees	Added out-of-state tuition
Brigham Young U	1,550	1,620	0
C of Eastern Utah	870	872	1,462
LDS Business C	1,535	1,540	0
Snow C*	813	873	1,431
Southern Utah St C	969	1,071	1,770
Stevens-Henager C	3,240	3,877	0
U of Utah*	1,190	1,542	2,709
Utah Valley CC	936	1,026	1,755
Weber St C	1,017	1,095	1,863
Westminster C of Salt Lake City	4,940	5,250	0

VERMONT

	1986-87	1987-88	
	Tuition and fees	Tuition and fees	Added out-of-state tuition
Bennington C	13,970	14,850	0
Burlington C	4,650	4,950	0
Champlain C	4,795	5,095	0
C of Saint Joseph	4,700	5,000	0
Green Mountain C	5,961	6,355	0
Marlboro C	9,710	10,320	0
Saint Michael's C	7,290	7,720	0
Sch for Int'l Training	6,609	7,000	0
Southern Vermont C	4,040	4,600	0
Sterling C	6,300	7,900	0
Trinity C	6,035	6,445	0
Vermont St C System			
Castleton St C	2,246	2,406	2,598
CC of Vermont	1,520	1,610	1,530
Johnson St C	2,278	2,400	2,598
Lyndon St C	2,322	2,490	2,598
Vermont Tech C	2,680	2,838	2,424

VIRGINIA

	1986-87	1987-88	
	Tuition and fees	Tuition and fees	Added out-of-state tuition
Averett C	4,650	5,500	0
Bluefield C	3,480	3,880	0
Bridgewater C	6,000	6,480	0
Christendom C	5,820	6,025	0
Christopher Newport C	1,740	1,920	1,200
C of William and Mary	2,540	2,750	4,484
Richard Bland C	1,040	1,260	1,850
Eastern Mennonite C	5,828	5,828	0
Emory and Henry C	5,097	5,544	0
Ferrum C	4,950	5,700	0
George Mason U	1,680	1,824	1,824
Hampden-Sydney C	8,305	8,950	0
Hampton U	4,400	4,720	0
Hollins C	8,350	8,600	0
James Madison U	2,392	2,472	1,980
Liberty U	3,210	3,210	0
Longwood C	2,529	2,638	1,488
Lynchburg C	6,825	7,300	0
Mary Baldwin C	6,550	7,150	0
Mary Washington C	1,902	2,122	2,008
Marymount U	6,150	6,700	0
National Business C	2,935	3,270	0
Radford U	1,796	1,920	834
Randolph-Macon C	7,140	7,715	0
Randolph-Macon Woman's C	8,285	8,780	0
Roanoke C	7,000	7,700	0
Saint Paul's C	3,390	3,590	0
Shenandoah C and Conservatory of Music	6,800	6,800	0
Southern Seminary C	5,450	5,900	0
Sweet Briar C	8,920	9,450	0
U of Richmond	7,675	8,335	0
U of Virginia	2,250	2,366	3,430
Clinch Valley C	1,404	1,472	864
Virginia CC System			
Blue Ridge CC	772	770	2,973
Central Virginia CC	810	765	2,973
Eastern Shore CC	774	772	2,973
Germanna CC	771	769	2,973
J Sargeant Reynolds CC	765	775	2,973
John Tyler CC	765	763	2,973
Lord Fairfax CC	780	770	2,973
New River CC	789	787	2,973
Northern Virginia CC	765	763	2,973
Paul D Camp CC	765	763	2,973
Piedmont Virginia CC	765	763	2,973
Southside Virginia CC	771	769	2,973
Thomas Nelson CC	771	769	2,973
Tidewater CC	765	763	2,973
Virginia Highlands CC	765	763	2,973
Virginia Western CC	850	765	2,880
Wytheville CC	774	772	2,973
Virginia Intermont C	4,375	4,825	0
Virginia Military Inst	n/a	4,055	3,000
Va Polytech Inst and St U	2,187	2,319	2,340
Virginia St U	1,800	2,348	1,810
Virginia Union U	4,118	4,583	0
Virginia Wesleyan C	5,700	6,200	0
Washington and Lee U	7,880	8,400	0

WASHINGTON

	1986-87	1987-88	
	Tuition and fees	Tuition and fees	Added out-of-state tuition
Antioch U Seattle	$5,250	$5,550	$ 0
Art Inst of Seattle	5,315	5,705	0
Bellevue CC	699	759	2,226
Big Bend CC	699	759	2,226
Central Washington U	1,212	1,272	3,153
Centralia C	699	759	2,226
City U	4,220	4,220	0
Clark C	714	759	2,226
Cogswell C North	7,650	7,650	0
Columbia Basin C	720	780	2,226
Cornish C of Arts	5,949	6,155	0
Eastern Washington U	1,212	1,272	3,153
Edmonds CC	705	765	2,226
Everett CC	699	759	2,226
Evergreen St C	1,212	1,272	3,153
Gonzaga U	6,750	7,500	0
Grays Harbor C	699	759	2,226
Green River CC	699	759	2,226
Griffin C	4,080	4,970	0
Heritage C	3,330	3,720	0
Highline CC	699	759	2,226
Lower Columbia C	684	759	2,226
Lutheran Bible Inst	3,450	3,865	0
Northwest C	4,201	4,501	0
Olympic C	699	759	2,226
Pacific Lutheran U	7,155	7,780	0
Peninsula C	684	759	2,226
Pierce C	699	759	2,226
Puget Sound Christian C	2,505	2,700	0
Saint Martin's C	6,470	7,090	0
Seattle CC District			
Seattle Central CC	699	759	2,226
North Seattle CC	690	759	2,226
South Seattle CC	690	759	2,226
Seattle Pacific U	6,405	7,200	0
Seattle U	6,660	7,520	0
Shoreline CC	687	759	2,226
Skagit Valley C	699	759	2,226
South Puget Sound CC	699	759	2,226
Spokane CC	719	795	2,226
Spokane Falls CC	711	795	2,226
Tacoma CC	699	759	2,226
U of Puget Sound	7,580	8,340	0
U of Washington	1,590	1,731	3,078
Walla Walla C	6,445	6,825	0
Walla Walla CC	699	759	2,226
Washington St U	1,606	1,731	3,078
Wenatchee Valley C	699	759	2,226
Western Washington U	1,230	1,299	3,153
Whatcom CC	665	759	2,226
Whitman C	8,050	8,610	0
Whitworth C	7,220	7,815	0
Yakima Valley CC	699	770	2,226

WEST VIRGINIA

	1986-87	1987-88	
	Tuition and fees	Tuition and fees	Added out-of-state tuition
Alderson-Broaddus C	5,772	6,178	0
Appalachian Bible C	2,747	2,945	0
Beckley C	1,206	1,288	0
Bethany C	7,840	8,470	0
Bluefield St C	890	920	1,510
Concord C	908	930	1,510
Davis and Elkins C	5,605	6,170	0
Fairmont St C	898	922	1,510
Glenville St C	890	934	1,510

WEST VIRGINIA—Continued

	1986-87	1987-88	
	Tuition and fees	Tuition and fees	Added out-of-state tuition
Huntington JC of Bus	$2,700	$3,600	$ 0
Marshall U	1,042	1,096	1,750
National Education Ctr			
National Inst of Tech	3,600	3,600	0
Ohio Valley C	3,410	3,580	0
Parkersburg CC	750	750	1,770
Potomac St C of W Va U	900	930	1,510
Salem C	5,380	5,380	0
Salem C Clarksburg	4,750	5,400	0
Shepherd C	890	930	1,510
Southern W Va CC	600	600	1,420
U of Charleston	5,300	6,000	0
West Liberty St C	900	936	1,510
West Virginia Inst of Tech	940	970	1,580
W Va Northern CC	600	600	1,420
West Virginia St C	906	938	1,510
West Virginia U	1,280	1,316	1,980
West Virginia Wesleyan C	6,100	6,530	0
Wheeling C	6,100	6,695	0

WISCONSIN

	1986-87	1987-88	
	Tuition and fees	Tuition and fees	Added out-of-state tuition
Alverno C	5,020	5,320	0
Beloit C	8,590	9,198	0
Blackhawk Tech Inst	900	1,018	7,010
Cardinal Stritch C	4,980	5,380	0
Carroll C	7,670	8,120	0
Carthage C	6,352	6,782	0
Concordia C	4,800	5,200	0
District One Tech Inst	900	1,018	7,010
Edgewood C	5,100	5,360	0
Fox Valley Tech Inst	900	1,018	7,010
Gateway Tech Inst	805	1,018	7,010
Lakeland C	5,900	6,200	0
Lakeshore Tech Inst	900	1,018	7,010
Lawrence U	9,252	9,900	0
Madison Area Tech C	738	1,018	7,010
Madison Business C	2,430	2,490	0
Marian C of Fond Du Lac	5,270	5,570	0
Marquette U	6,026	6,476	0
Mid-State Tech Inst	900	1,018	7,010
Milwaukee Inst of Art and Design	5,050	5,150	0
Milwaukee Sch of Engr	6,470	6,750	0
Moraine Park Tech Inst	900	1,018	7,010
Mount Mary C	4,840	5,240	0
Mount Senario C	4,200	4,600	0
Nicolet C and Tech Inst	1,100	1,270	4,280
North Central Tech Inst	900	1,018	7,010
Northeast Wis Tech Inst	900	1,018	7,010
Northland C	5,700	6,035	0
Northwestern C	1,804	1,930	0
Ripon C	8,942	9,623	0
Saint Norbert C	6,545	6,985	0
Silver Lake C	4,600	5,100	0
SW Wis Voc Tech Inst	900	1,018	7,010
Stratton C	4,360	4,360	0
U of Wisconsin Centers			
Baraboo-Sauk County	1,235	1,349	2,758
Barron County	1,298	1,409	2,758
Fond Du Lac	1,254	1,363	2,758
Fox Valley	1,242	1,358	2,758
Manitowoc County	1,245	1,359	2,758
Marathon County	1,246	1,357	2,758

WISCONSIN—Continued

	1986-87	1987-88	
	Tuition and fees	Tuition and fees	Added out-of-state tuition
U of Wisconsin Centers			
Marinette County	$1,258	$1,369	$2,758
Marshfield-Wood Co	1,261	1,373	2,758
Richland	1,322	1,436	2,758
Rock County	1,240	1,352	2,758
Sheboygan County	1,243	1,355	2,758
Washington County	1,249	1,362	2,758
Waukesha County	1,245	1,354	2,758
U of Wisconsin Eau Claire	1,447	1,578	2,881
Viterbo C	5,180	5,500	0
Waukesha Co Tech Inst	900	1,018	7,010
Western Wis Tech Inst	900	1,018	7,010
Wis Indianhead Voc Tech and Adult Ed District	900	1,018	7,010
Wisconsin Lutheran C	4,770	4,990	0
Wis Sch of Electronics	4,320	4,500	0

WYOMING

	1986-87	1987-88	
	Tuition and fees	Tuition and fees	Added out-of-state tuition
Casper C	506	546	920
Central Wyoming C	488	520	920
Eastern Wyoming C	450	500	920
Laramie County CC	533	568	920
Northwest CC	570	610	920
Sheridan C	562	602	920
U of Wyoming	778	778	1,864
Western Wyoming CC	464	490	0

PUERTO RICO

	1986-87	1987-88	
	Tuition and fees	Tuition and fees	Added out-of-state tuition
American C of PR	1,800	2,000	0
Antillian C	2,122	2,260	0
Bayamon Central U	1,510	1,510	0
Caguas City C	2,350	2,725	0
Caribbean U C	1,965	2,235	0
Catholic U of Puerto Rico	1,815	1,965	0
Consv of Music of PR	150	150	0
Electronic Data Processing C of PR	2,046	1,658	0
ICPR JC	2,213	2,213	0
Inst Tech Comercial JC	1,380	1,420	0
Inter American U of PR			
Metropolitan	1,650	1,980	0
Regional C's	1,980	1,980	0
San German	1,650	1,980	0
Puerto Rico JC	1,560	2,044	0
Ramirez C of Bus & Tech	2,165	2,165	0
Tech C of Municipality of San Juan	620	620	0
Turabo U	2,002	2,050	0
U Metropolitana	1,550	2,050	0
U Politech of Puerto Rico	2,670	2,870	0
U of Puerto Rico			
Cayey U C	527	490	0
Humacao U C	565	505	0
Mayaguez	527	490	0
Medical Sciences	660	565	0
Rio Piedras	545	490	0
Aguadilla Regional C	525	340	0
Arecibo Tech U C	377	377	0
Bayamon Tech U C	552	340	0
Carolina Regional C	397	340	0
La Montana Regional C	377	340	0
Ponce Tech U C	377	340	0
U of the Sacred Heart	1,904	2,055	0

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9/2/87 C2175-1

THE CHRONICLE
of Higher Education.

ISSN 0009-5982

September 2, 1987 • $1.95
Volume XXXIV, Number 1

News Summary

For the convenience of readers, *The Chronicle* is now published in two sections. Section 2, containing Opinion articles and Bulletin Board notices, may be pulled out of Section 1.

Articles on inside pages

A scientist at Montana State University has been chastised for testing a genetically altered bacterium without approval. Story on Page A15.

Cross-national studies are becoming increasingly prominent in sociological research. Story on Page A15.

Community colleges in California are embroiled in a statewide fight over governance and academic standards. Story on Page A59.

Intrusion by the states into higher education is rising, says the president of the Education Commission of the States. Story on Page A59.

A government report on the relative costs of public and private higher education has angered private-college leaders. Story on Page A59.

Campus sports officials have assailed a decision permitting ineligible college athletes to play professional football. Story on Page A98.

The murder of five students and five professors in Colombia signals a major escalation of political confrontation there. Story on Page A110.

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THE YEAR AHEAD

"Evidence is accumulating around the world that greatly increased access to higher education is coming at a tremendous price: a severe and pervasive decline in academic quality."

See International Section, Page A100

Scientific sights will be trained this year on both the distant and the near—from light-years away to inside the human body. **A6**

Barriers are coming down in the humanities and social sciences. **A6**

A wave of curricular reform, stressing interdisciplinary connections, is reshaping higher education. **A28**

A push for more flexibility in higher education's leading pension firms may come to a showdown. **A28**

Training of schoolteachers will be in the spotlight as school reform focuses on the classroom. **A48**

Governors, legislators, and other leaders have high expectations for public colleges and universities. **A52**

HARVARD UNIVERSITY: JOE WRINN

More than any other recent Presidential campaign, the already brewing 1988 race for the White House is expected to focus heavily on education. **A52**

Twenty-five years after James Meredith became the first black to enroll at the University of Mississippi, the outlook for minorities in higher education is bleak. **A88**

More colleges and universities than ever before are conducting capital campaigns to finance everything from faculty salaries to new equipment and academic programs. **A72**

The influence of conservative foundations is increasing. **A72**

Disparities between rich and poor students are growing, changing the tenor of campus life. **A80**

Conservative student activists will focus on domestic and international politics, while students on the left will be more concerned with issues on their campuses. **A80**

College presidents are deeply divided over how to scale back big-time sports programs—or whether they should be curtailed at all. **A92**

Many Americans Think College Costs Much More than It Actually Does, a Chronicle Survey Finds

By JEAN EVANGELAUF

While most Americans are worried about spiraling tuition, many either think higher education is more expensive than it actually is or have no idea of its cost.

A *Chronicle* survey of public opinion about the price and quality of higher education also found that:

► Seven in ten Americans believe the quality of a college education is getting better or staying the same, while only two in ten think it is getting worse.

► Some 52 per cent rate the financial condition of colleges fair or poor and 36 per cent consider it good or excellent.

► Six in ten say students or parents should bear most of the costs of college, while two in ten believe the states or the federal government should assume the burden.

► Despite widespread media attention to scandals in college sports, few people believe that either cheating in intercollegiate athletics or overemphasizing big-time sports is among the most serious problems confronting colleges.

The survey results show that in the debate about college costs, the public does not agree with Education Secretary William J. Bennett's view that greed and the availability of student aid have prompted colleges to raise tuition faster than the cost of living for each of the last seven years.

Asked to list three reasons why they thought costs had risen in recent years, 35 per cent of the respondents cited faculty and staff salary increases, 34 per cent cited inflation, and 30 per cent cited the increased costs of facilities and equipment—all reasons that are frequently given by the colleges themselves. Only 5 per cent said colleges had raised tuition because they were greedy or were poorly managed, and just 2 per cent said costs had risen because colleges could count on federal student aid to minimize the increase.

To gauge people's awareness of college costs, the survey asked them to give their best estimate of the average cost of a year at college, including tuition and fees, room and board, books and supplies, transportation, and personal expenses, and to estimate what they thought the average family was willing to pay for college.

They placed the average cost at a private, four-year college or university at $13,400, with one in five saying it was $20,000 or more. A typical family, they said, would be willing to pay $9,610. According to the College Board, which annually compiles college data on the subject, total costs at a private four-year college for a student who lives in campus housing average $11,982 for the 1987-88 academic year.

Asked about costs at a public, four-year college or university,

Continued on Page A70

Misconceptions of College Costs

	Public's "guesstimate"	Actual cost
Private 4-year institutions	$13,400	$11,982
Public 4-year institutions	9,120	5,789
Public 2-year institutions	4,500	3,889

Note: Estimates are from the Chronicle survey of public opinion. Actual costs are 1987-88 averages reported by the College Board for resident students at 4-year institutions and commuter students at 2-year colleges.

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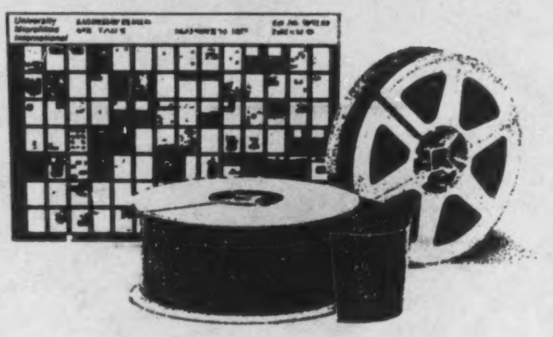

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Many Overestimate Costs of College, Survey Finds

Continued from Page A1

the public put the average at $9,120 and said the typical family was willing to pay $6,120. The cost estimate was substantially above the College Board figure of $5,789 for a resident student.

The public was much closer to the mark on costs at public, two-year colleges, estimating them at $4,500 and saying the average family was willing to pay $3,360. The actual cost for a student who lives at home and commutes to college is $3,889. (Because of insufficient data, the College Board did not calculate costs for the relatively few community-college students who live on campus.)

Many Unable to Guess

Many people were not even able to guess about college costs and a family's willingness to meet them; at least one in four answered "Don't know" to each of the cost questions.

The telephone survey was conducted for *The Chronicle* by SRI Gallup, a division of SRI Research Center, a market-research company based in Lincoln, Neb. It covered a random sample of 1,000 adults and was proportional to the U.S. population by age, sex, and geographic area. The margin of sampling error is plus or minus 3.1 percentage points at a 95-per-cent level of confidence.

Some Striking Differences

Asked who should bear the primary responsibility for college costs, 36 per cent named students, 23 per cent named parents, 13 per cent named the state government, and 9 per cent named the federal government. However, those average figures mask some striking differences of opinion on who should pay for college among people of different ages, men and women, and those with different educational backgrounds.

Older people were more likely than younger people to put the responsibility on parents. Among those aged 45 to 54, for example, 33 per cent said students should pay and 30 per cent said parents should, while among those between the ages of 18 and 24, 37 per cent said students should pay and 17 per cent said parents should.

Among college graduates, 42 per cent thought students had the major responsibility, while only 16 per cent said parents do. Among those with a high-school diploma or less, the gap was narrower: 32 per cent named students and 27 per cent named parents. Among men, 42 per cent placed the responsibility on students and 16 per cent on parents; among women, the figures were 31 per cent and 29 per cent, respectively.

Drug Abuse a Problem

While the survey results show that, over all, the public considers student abuse of alcohol and other drugs an important problem, people who did not attend college and women are more likely to consider it a serious one. Asked specifically about the problem on college campuses today, 74 per cent of those with a high-school education or less said it was important, while only 37 per cent of college graduates agreed. By sex, 66 per cent of the women and 55 per cent of the men rated it important.

The public does not believe racial incidents pose a major concern for colleges: Fewer than one in four considered them an important problem.

CHRONICLE SURVEY

What the Public Thinks About Higher Education

What are the biggest problems facing colleges today?

Not enough money	32%
Student attitude or drug problems	23%
Poor quality of academic programs	22%
Tuition is too high	12%
Enrollment is declining	6%
Not enough student financial aid	5%
Students are not prepared	5%
Too much emphasis on "big-time" sports	2%
Poor facilities	1%
Not enough public or government support	1%
Cheating in intercollegiate athletics	1%
Other	18%
Don't know	13%

Note: Respondents could give 3 answers.

How important are these problems facing colleges today?

	Important	Somewhat important	Not important
Too-high tuition	68%	17%	10%
Not enough money	65%	17%	13%
Abuse of alcohol or other drugs by students	61%	21%	15%
Not enough student financial aid	56%	22%	15%
Not enough good professors	48%	25%	17%
Too much emphasis on "big-time" sports	52%	22%	23%
Cheating in intercollegiate athletics	47%	23%	21%
Poor quality of academic programs	36%	31%	25%
Racial incidents	22%	25%	47%

Note: "Don't know" answers omitted.

Why do you think college tuition is rising?

Salary increases	35%
Inflation	34%
Additional costs of facilities and equipment	30%
Loss of government aid	7%
Colleges' greed or poor management	5%
Fewer students, so greater cost per student	3%
Need to improve educational quality	2%
Availability of government aid to students	2%
Other	13%
Don't know	18%

Note: Respondents could give 3 answers.

Who should bear most of the costs of college?

Students	36%
Parents	23%
State government	13%
Federal government	9%
Taxpayers	3%
Colleges	1%
Both parents and students	1%
Other	4%
Don't know	10%

How do you rate the financial situation of colleges?

Excellent	5%
Good	31%
Fair	37%
Poor	15%
Don't know	13%

How do you rate the quality of a college education?

Getting better	38%
Staying the same	33%
Getting worse	20%
Don't know	9%

If you believe the quality is getting better, why specifically do you say that?

Curriculum is better	31%
Improved faculty quality	24%
Better student quality	22%
Improved technology or facilities	16%
Students can obtain better jobs	10%

Note: Respondents could name two reasons; the top five are reported.

If you believe the quality is getting worse, why specifically do you say that?

Poorly prepared students	34%
Lower faculty quality	19%
Lower educational standards	17%
Problems with moral values of students	16%
Costs increasing too much	5%

Note: Respondents could name two reasons; the top five are reported.

What do you think a year at a private 4-year college or university costs?

$20,000 and above	19%
$15,000-$19,999	12%
$11,000-$14,999	12%
$8,000-$10,999	16%
$5,000-$7,999	9%
Up to $5,000	3%
Don't know	28%
Average	**$13,400**

What do you think the average family is willing to pay for a year at a private 4-year college?

$20,000 and above	9%
$15,000-$19,999	4%
$11,000-$14,999	4%
$8,000-$10,999	16%
$5,000-$7,999	17%
Up to $5,000	13%
Don't know	36%
Average	**$9,610**

What do you think a year at a public 2-year college costs?

$10,000 and above	6%
$7,000-$9,999	5%
$5,000-$6,999	13%
$3,000-$4,999	15%
$2,000-$2,999	14%
Up to $2,000	16%
Don't know	30%
Average	**$4,500**

What do you think the average family is willing to pay for a year at a public 2-year college?

$10,000 and above	2%
$7,000-$9,999	2%
$5,000-$6,999	7%
$3,000-$4,999	15%
$2,000-$2,999	15%
Up to $2,000	23%
Don't know	33%
Average	**$3,360**

What do you think a year at a public 4-year college or university costs?

$20,000 and above	7%
$12,000-$19,999	7%
$8,000-$11,999	21%
$6,000-$7,999	12%
$4,000-$5,999	17%
Up to $4,000	9%
Don't know	24%
Average	**$9,120**

What do you think the average family is willing to pay for a year at a public 4-year college?

$20,000 and above	2%
$12,000-$19,999	2%
$8,000-$11,999	10%
$6,000-$7,999	6%
$4,000-$5,999	21%
Up to $4,000	23%
Don't know	33%
Average	**$6,120**

How the survey was done: This public-opinion poll was conducted by telephone during the month of June by SRI Gallup, a division of SRI Research Center, a market-research company based in Lincoln, Neb. It covered a random sample of 1,000 adult heads of household and was proportional to the U.S. population by age, sex, and geographic area. The margin of sampling error is plus or minus 3.1 percentage points at a 95-per-cent level of confidence.

Note: Figures may not total 100 per cent because of rounding or because respondents could give more than one answer.

Give & Take

Big gifts will be the big story in fund raising in the year ahead, predicts Arthur C. Frantzreb, a consultant in philanthropy.

Gifts to colleges and universities of $1-million or more can be counted on to increase substantially in number this year, says Mr. Frantzreb, who has been tracking major-gift activity for several years. He identified 207 gifts to charity of $1-million or more in the second quarter of 1987, up from 138 in the same period a year earlier. His listings are based on published reports, he notes, and represent only about half of all major gifts.

Why will the trend continue? Greater sophistication in the marketing of "gift opportunities" by non-profit organizations, says Mr. Frantzreb, and growth in the charitable inclinations of Americans.

"Donors are more generous because they have more confidence in the organizations they care about," he says. "Those institutions have been trying to carefully design their destiny and determine what it will cost to achieve, and their supporters are willing to help insure that destiny. And that goes for the small donors as well as the big ones."

▪

The unveiling of a program of grants by the Howard Hughes Medical Institute is one of the major developments in foundation philanthropy that grant-seekers are looking forward to this year.

While final details of the plan will not be announced until later in the fall, its general outline can be reported now. The program will comprise three major components: grants to colleges and universities to strengthen undergraduate education in science; fellowships; and support for distinguished research institutions and organizations.

The Hughes Institute, the world's wealthiest research organization, is anticipating spending spend $40-million on the program in the year ahead. It was developed under the terms of a settlement reached by the institute in a long-standing dispute over its tax status with the Internal Revenue Service.

▪

A postage stamp in recognition of philanthropy could become a reality in the coming year.

The Citizen's Stamp Advisory Committee has put the proposal on the agenda for its September meeting "without even being asked to do so," says Milton J. Murray, director of philanthropic services for Seventh-Day Adventist institutions and the coordinator of a drive to win a philanthropy stamp.

"I believe that momentum is building," he says.

Earlier efforts to win approval for the stamp were unsuccessful.

Mr. Murray is urging the committee to introduce the philanthropy stamp in 1990 to mark the centennial of the formation at Yale University of the first alumni annual fund in higher education.

THE YEAR AHEAD: Philanthropy

Fund Drives Get Bigger, Broader: 65 College Goals Top $100-Million

By ANNE LOWREY BAILEY

THE YEAR OF THE CAPITAL CAMPAIGN: That's how college officials and fund-raising consultants view the 1987-88 academic year.

Far more colleges than ever before will turn to capital campaigns in their efforts to finance everything from student aid and faculty salaries to new equipment, buildings, and academic programs.

In the process, they will pursue fund-raising goals that would have been unimaginable a few years ago. For example:

► Some 40 U.S. colleges and universities are racing to raise $100-million or more, and at least 25 others are planning such campaigns.

► At least 100 colleges are seeking $15- to $100-million.

► Hundreds of colleges are running capital campaigns with goals of under $15-million.

Just one year ago, college fund raisers were deeply worried that the Tax Reform Act of 1986, then taking its final shape, would hurt donations to their institutions. But so far, most have seen almost no impact on giving, or on their plans to launch capital campaigns.

"A sense of optimism about raising funds for higher education has replaced the panic that was everywhere in this field a year ago," says George A. Brakeley, III, executive vice-president of Brakeley, John Price Jones, a consulting company.

Surveys of current campaign activity conducted by his company, according to Mr. Brakeley, have found nothing to suggest a slowdown in donor support for large-scale fund-raising efforts.

For their part, college fund raisers are bullish about their prospects for the year ahead.

"I'm raising a million a week," says Paul A. Franz, vice-president for development at Lehigh University, which is conducting a two-year campaign to raise $89-million. "If it's going to be a world of haves and have-nots, we sure intend to be among the haves."

BESIDES the number of institutions trying to raise record amounts, veteran college fund raisers and consultants say capital-campaign activity this year will be precedent-setting for other reasons, as well:

► New, sophisticated fund-raising techniques will change the way campaigns are run.

► The scope of campaigns will continue to widen, with many colleges raising money not just for capital projects, but also for current operations, endowment, and a host of big-ticket items.

► The intervals between campaigns will get shorter.

Above all, they say, goals will continue to soar, and far more money will be raised.

"Stanford raised everyone's sights," said one fund raiser of that university's $1.1-billion campaign. The drive, officially announced in February, has raised $400-million to date.

MOST MAJOR PRIVATE UNIVERSITIES are now preparing for, in the middle of, or finishing up capital campaigns. Experts say the "finishing up" goes on for two or three years after the conclusion of a campaign—about how long it takes for major pledges to be paid off.

In the spring, the University of Notre Dame began a

Conservative Foundations to Turn Attention to Philanthropy Itself

By PAUL DESRUISSEAUX

Conservative foundations have earned a reputation for aggressive use of their philanthropic resources to generate ideas and influence thinking on a range of public-policy issues. In the year ahead, however, they will turn some of their attention to efforts to shape the debate in another area of concern to them: foundation philanthropy itself.

"When it comes to discussing many of the issues in which foundations are involved, the kind of perspectives that most people would refer to as 'conservative' just don't get an airing," says Leslie Lenkowsky. "We want to change that."

Mr. Lenkowsky is president of the Institute for Educational Affairs, an organization he describes as "the conservative interest group in the philanthropic world." Now based in Washington, the 10-year-old institute was formed and financed by foundations and corporations to design and coordinate programs that would stimulate interest in conservative ideas.

Among other things, the institute has played a prominent role in the development of a network of conservative student newspapers at some three dozen colleges and universities across the country, including all of the Ivy League institutions.

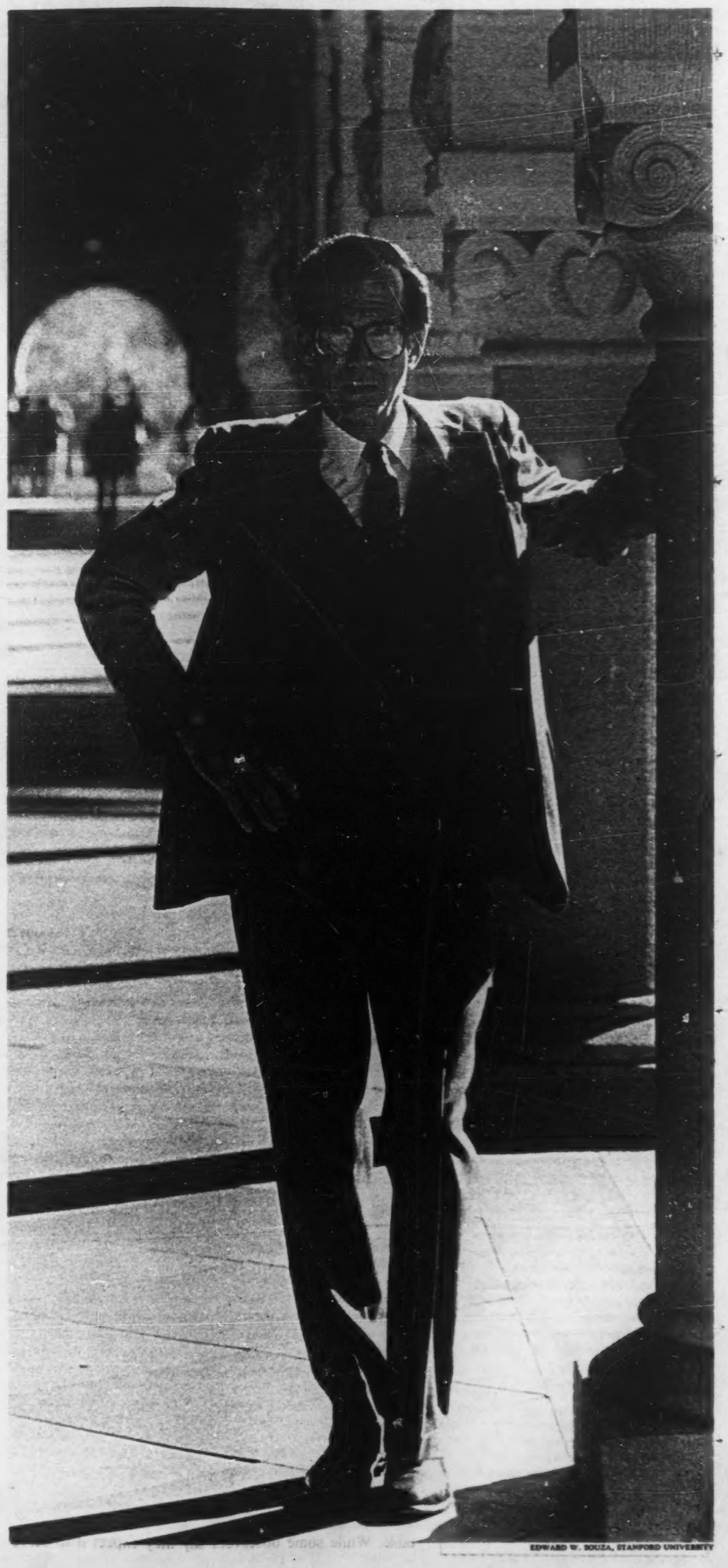
PHOTOGRAPH FOR THE CHRONICLE BY SAM KITTNER

Leslie Lenkowsky: "The kind of perspectives that most people would refer to as 'conservative' just don't get an airing."

Last spring Mr. Lenkowsky announced the formation of a new program of the institute: the Philanthropic Roundtable. While some observers say they expect it to serve mainly as an outlet for conservative views on national affairs as well as on philanthropy, the organization will be primarily concerned with subjecting foundation giving to greater scrutiny, according to Mr. Lenkowsky.

"The *effectiveness* of philanthropic support is the issue

Continued on Page A74, Column 1



Stanford U.'s Donald Kennedy: "Everybody is running hard to stay even—that's the gut problem in the economics of higher education today."

EDWARD W. SOUZA, STANFORD UNIVERSITY

campaign to raise $300-million. Next month, the Massachusetts Institute of Technology will announce a capital campaign to raise $550-million. In December, Washington University in St. Louis will conclude a campaign that thus far has raised $553-million, and Columbia University will complete one that has raised over $549-million.

Several major public institutions this year will begin their first capital campaigns ever—all with goals of $100-million or more. The University of Arizona is expected to announce its first campaign in November; in the same month, the University of California at Berkeley will begin the public phase of a drive to raise more than $320-million. The Universities of Colorado, Florida, South Florida, Kansas, Wisconsin, California at Irvine; and Michigan State and Wichita State Universities all will enter the "private," planning phases of their first capital drives this year, with preliminary goals of at least $100-million.

Those institutions will join scores of other public universities that have, over the past two years, begun their first major capital campaigns, some with extraordinary goals. The University of California at Los Angeles is seeking to raise $300-million; Indiana University, $203-million; the University of Iowa, $150-million; the University of Michigan, $160-million; the University of Minnesota, $300-million; the Ohio State University, $350-million; the University of Oklahoma, $100-million; Pennsylvania State University, $200-million; Rutgers University, $100-million; and the University of Utah, $150-million.

Officials at public universities say that private contributions are needed not only to enhance their programs but to help support their operations as well. "The mix of government and private support here is almost the same as at private universities," says Marion B. Peavey, vice-president for development and university relations at the University of Virginia.

Most fund raisers at private institutions now acknowledge that the entry into big-time fund raising by public universities has not been the threat they had feared a few years ago. "A rising tide lifts all boats," says Roger F. Olson, senior vice-president for university relations at the University of Southern California.

SMALLER COLLEGES, which used to conduct campaigns once every 10 to 12 years, now are mounting capital fund-raising efforts every 6 to 8 years, experts say. Their goals, too, are skyrocketing: In June, DePauw University, which has an enrollment of 2,300 students, completed a campaign that began with a $90-million goal, shifted to a $100-million goal, and ended by raising $122-million. This fall, Davidson College, which has an enrollment of 1,200, will begin the private phase of a campaign with a preliminary goal of $150-million.

The sizes of campaign goals have led to charges by some well-placed critics—including Education Secretary William J. Bennett and House Ways and Means Chairman Dan Rostenkowski—that colleges are more greedy than needy.

As a result, one revenue-raising idea that surfaced on Capitol Hill this summer would impose a 5-per-cent tax on university endowment income. Such a measure would "strongly discourage" private contributions to endowments—a leading component of most modern campaigns, says Stephen W. Roszell, vice-president for alumni and development at the University of Minnesota.

Fund raisers concede that they are working harder to make their case with major donors. "If someone gives you $10-million, you'd better have some pretty compelling rea-

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the theory that there is a place in the market for new and good ideas."

The Bradley Foundation started out as the corporate-giving arm of the Allen-Bradley Company, established by the brothers Lynde and Harry Bradley. When that business was acquired by Rockwell International Corporation in 1985, the philanthropy—which received a large share of the proceeds—was reshaped as a national foundation and re-named for the brothers. According to its guidelines, the foundation supports, among other things, "scholarly activities investigating the moral, cultural, intellectual, and economic roots of the institutions that form a free society." It has assets of $390-million and will make grants this year totaling $23-million.

The Bradley Foundation and many of the other grant makers described as conservative have programs of general support for colleges and universities, often with a regional bias. Much of the grant money that higher education receives from such foundations, however, is to support work on policy issues.

Mr. Lenkowsky predicts that in the year ahead the themes that will emerge strongly as principal concerns of conservative-oriented foundations will involve "individual character," social welfare, and national defense.

"There is a lot of interest in what are called 'character issues,' the ways in which individual character and values are factors across a whole range of social problems and concerns—poverty, delinquency, education," he says. "What grant makers will begin to do is look for ways to translate insights into practical programs."

FOR ITS PART, the Institute for Educational Affairs will work with its members to try to develop such programs.

When the institute was founded—by, among others, William E. Simon, the former U.S. Treasury Secretary and longtime president of the John M. Olin Foundation, and Irving Kristol, one of the editors of *The Public Interest*, a conservative policy journal—it was seen by some observers as an attempt to coordinate conservative philanthropic resources in ways that would help achieve, says one, "a much bigger bang for the bucks." The institute never quite lived up to that expectation—it has been reorganized in recent years—but it did help provide both opportunities and leadership that enabled relatively small grant makers to be involved in larger trends in conservative philanthropy.

Now, through its Philanthropic Roundtable, it seeks to bring a new perspective to the discussion of issues in philanthropy, among them the slowdown in the rate of formation of new foundations.

"The liberal tradition of philanthropy sees the role of foundations as developing projects at the local level that are later translated into government programs," says Mr. Lenkowsky. "That's been the classic model of philanthropy. But recent studies have shown that one of the reasons people set up foundations is their strong belief in seeing things done in the private sector; they have a certain anti-government view, and are even suspicious of government.

"Well, if in fact the dominant view in the field is that philanthropy is a kind of change agent, where ultimate virtue is to be found in creating a new government program, that's not going to rub off very well on the kind of people who are capable of setting up foundations. I think that's one of the reasons why we've seen a slowdown in the creation of new ones."

The Philanthropic Roundtable will also seek to influence thinking on the ways in which foundations and corporate grant makers can have greater impact on the issues in which they are involved. Its newsletter has featured Education Secretary William J. Bennett's views on what philanthropy can do to support education ("1. Remember elementary and secondary education"), as well as articles on the role philanthropy can play in helping the homeless, supporting the arts, and protecting the environment—while still supporting private enterprise.

Mr. Lenkowsky served briefly as deputy director of the U.S. Information Agency until, as one observer put it, he "took the fall" for its director, Charles Z. Wick, after the discovery of a "blacklist" of individuals who, because of their liberal politics, were not to be picked to take part in the agency's overseas lecture series. Mr. Lenkowsky maintains that he was the one who actually discovered the existence of the list.

Mr. Lenkowsky is eager to share his ideas on the role of philanthropy with respect to many issues—democracy, for one. "My hunch is that most people involved in philanthropy do not realize that there are constructive things they can do to help promote democratic organizations and initiatives in countries like Nicaragua and El Salvador," he says. "We are going to be telling people that there are things other than helicopter gunships that you can support if you are interested in bringing democracy to Central America.

"Right now we have this democratic initiative going on in Central America, and one of the key issues will be whether or not *La Prensa*, the opposition newspaper in Nicaragua, will be allowed to resume publishing, and whether or not the Catholic radio station there is going to start broadcasting again. There are ways and organizations—such as the National Endowment for Democracy—that can help American foundations provide assistance for those things. For American grant makers interested in doing something constructive about democracy in Nicaragua, these are opportunities to get on board, although my sense is that most people don't know that.

"My guess," adds Mr. Lenkowsky, "is that there is not another place in the philanthropic world where you would hear what I just said."

He says it was partly because views such as that could not get an airing at national meetings of the Council on Foundations that some conservative grant makers withdrew from that organization. Mr. Lenkowsky was a top official of the Smith Richardson Foundation in 1983 when, at the council's annual meeting, he complained about this state of affairs. "We see less and less interest in having views like ours heard at meetings like this," he said. His foundation soon dropped out.

Many other conservative foundations left the council when acceptance of its guidelines on practices—including a commitment to affirmative action in grant making—became a requirement for membership.

For such grant makers, the new Philanthropic Roundtable represents an opportunity to again take part in debate on their field.

"I see this as an opportunity to form another kind of network," says Jack Brauntuch, executive director of the J. M. Foundation, established by Jeremiah Milbank in 1924. "My hope is that it will foster discussions that focus on issues and ideas, and not on 'us' and 'them.' "

The Council on Foundations has officially welcomed the new group and helped publicize its existence. Many of the council's members, including the Joyce Foundation of Chicago, have joined the roundtable.

"I see this as an effort to push donors to think more about what they stand for, to sharpen their ideas," says Craig Kennedy, president of the Joyce Foundation, which is not generally described as being either conservative or liberal. "I feel strongly that a foundation should stand for something—not for a moral or political reason, but to be more effective. When you have a philosophy behind your giving, you can make choices in a more definitive way."

Says Mr. Lenkowsky: "There are many things that we feel we can inject into the debate on philanthropy that simply aren't there now. We're interested in improving the dialogue in organized philanthropy, and in working to make it a better field. That's our agenda."

Colleges' Fund-Raising Drives: Bigger, More Sophisticated

Continued from Page A73

sons for going back two years later and asking for more," says Jake B. Schrum, vice-president for development at Emory University.

Many longtime fund raisers, such as Lehigh's Mr. Franz—who has been raising money for his university for 44 years—say that the need has never been greater. Most colleges list student aid, faculty salaries, and technological equipment as their most pressing priorities.

"Everybody is running hard to stay even—that's the gut problem in the economics of higher education today," said Donald Kennedy, president of Stanford, in announcing his university's campaign.

"Federal participation is conspicuously off—both in terms of investment in capital resources for doing modern research and in terms of investment in the human resources that come to us for training," he said. "So we are doing exactly what you would expect us to do, and exactly what we are asked to do from time to time by members of this Administration, namely, turning to private sources."

If the stakes are higher, so are the goals. "You're not in the major leagues if your goal is under $100-million," says William P. McGoldrick, vice-president for institute relations at Rensselaer Polytechnic Institute.

"There's an attitude: By God, if Princeton went for it, so will we," says one consultant. A case in point: When the University of Pittsburgh launched its first major capital campaign in June, its $225-million goal was just above the $200-million goal set by its hometown competitor, Carnegie Mellon University.

Some experts fear that one-upmanship will force some fund raisers to set aside their better judgment when setting campaign goals. "Woe be to the fund raiser who wants to set a goal that is less than the competition's," says Gary A. Evans, vice-chancellor for development and university relations at the University of North Carolina at Chapel Hill. "He can find his job on the line."

AS CAMPAIGNS have generated higher and higher goals, some colleges are struggling to achieve them. However, "progress" reports on campaigns rarely suggest a lack of it.

Because failure is unacceptable, some colleges have extended their campaign deadlines to reach their goals. Others have resorted to what fund raisers call "funny accounting." Fund raisers say they have heard of instances of the following in capital-campaign totals:

► Income from contract research conducted for corporations, counted as corporate giving.

► Restricted gifts, counted as part of the annual operating or unrestricted fund.

► Among public universities, the money automatically received from the state each year for each student enrolled, counted as student aid.

► Undocumented pledges, counted to meet overall campaign goals.

The goals have grown so large, and accounting practices so liberal, that experienced fund raisers tend to discount most announced campaign achievements. "We are facing a credibility issue with these big campaigns," says Martin Grenzebach, a fund-raising consultant.

A good portion of the money counted in some campaign totals would have been raised without a capital drive. Stanford fund raisers, for example, acknowledge that they would have raised $585-million of the $1.1-billion they are seeking even if they had not been in a campaign, and they reported that expectation when the university announced its campaign. At other colleges, less than one-third of the campaign goal will be in "new money," according to Mr. Grenzebach.

Some other colleges with ambitious campaigns are enjoying success surpassing their wildest dreams. Two years into its first capital campaign, a four-year effort to raise $100-million, the Georgia Institute of Technology met its goal and raised it to $145-million—only to meet the second goal a year later. The institute's trustees are considering raising the goal again.

The University of California at Los Angeles and Pomona College have also raised their goals, while Boston University and the University of Miami are considering such measures.

At New York University, which is seeking to raise $1-billion by the year 2000, the pace of fund-raising is accelerating far more rapidly than expected. "We are on a roll," says Naomi Levine, vice-president for external affairs. "We even held $10-million out of this year's total, so we can count it for next year."

SOME COLLEGES are running campaigns without announcing them. The University of Virginia, for example, has an "ongoing development effort" with a five-year goal of raising $350-million. Mr. Peavey, the vice-president for development, concedes that the effort has the

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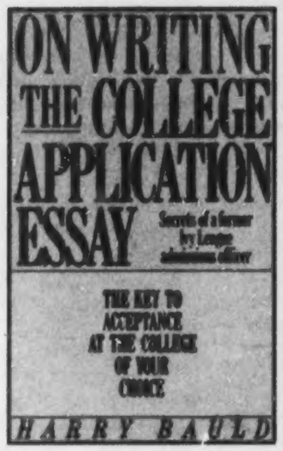
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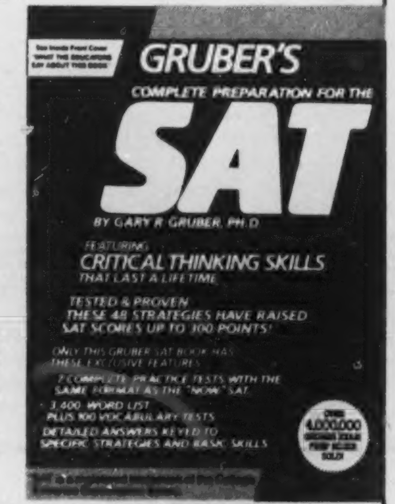
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THE YEAR AHEAD

Fund Drives Get Bigger and Broader: 65 College Goals Top $100-Million

Continued from Preceding Page

characteristics of a capital drive. "I wanted a little flexibility," he explains. "So we didn't call it a campaign."

The changing structure of campaigns is causing many colleges to lengthen their drives' private phase, which precedes the official announcement of a goal. Mr. Grenzebach, who now serves as a consultant to the University of Illinois, says securing each gift of $100,000 or more for the institution's last campaign required an average of seven to nine visits with the donor over a two-year period. Since the university was cultivating 300 major donors, that added up to approximately 2,400 personal calls. Fund raisers and other university officials had to make a substantial portion of those visits before they could announce the campaign's goal.

"That took time," says Mr. Grenzebach.

Ultimately, 129 donors gave 99.6 per cent of the $132.4-million raised in the Illinois campaign, reflecting a nationwide trend of fewer donors' giving a larger proportion of campaign totals. Whereas 80 per cent of a campaign's gift totals used to come from 20 per cent of the donors, fund raisers estimate that this year 95 per cent of the money raised will come from 5 per cent of the benefactors.

As the structure and function of campaigns have changed, the term "capital campaign" itself has become a misnomer. Among fund raisers, the term is fast giving way to the "comprehensive," "mega-," or "wall-to-wall" campaign. Mostly, people refer simply to "the campaign."

A campaign's pace is now seen as being as important as the actual dollars it is raising. The reason: Consider a $100-a-year donor who makes a $5,000 campaign pledge and pays it off at $1,000 a year. As he does so, he becomes accustomed to a higher level of annual giving. After the pledge is paid off, chances are good that the college can convert the capital gift to an annual gift.

At Columbia University, fund raisers will seek to maintain the momentum generated by their campaign after it ends in December, and will not reduce the size of their fund-raising staff. There, annual cash receipts from all types of gifts have more than doubled during the past five years, from less than $50-million in 1981-82 to $105-million this year.

At Stanford, the pace is fastest of all. The university is averaging $13.5-million in gifts each month, or $1-million every other day.

BURR GIBSON, A CONSULTANT, says colleges are relying too heavily on private fund-raising efforts to balance their budgets. He says they should be working harder to cut costs.

In fact, capital campaigns this year will "play a growing role in colleges' long-term planning," says the University of Southern California's Mr. Olson. For the second time in a decade, U.S.C. is conducting a mega-campaign, this time a five-year drive to raise $557-million; in July it passed the halfway mark on schedule, with $284.4-million raised.

To prepare for a campaign—and to persuade donors to invest in their cause—colleges must evaluate the quality of their financial management and other strengths and weaknesses, says Mr. Olson. That evaluation will lend focus and energy to planning processes. And it will force the college to make tough decisions about their fund-raising—and therefore budget—priorities; to set goals and deadlines; and to open dialogue among administrators, faculty members, and trustees.

Conversely, vastly improved long-range planning will affect the purposes for which colleges are raising money. "All dollars are not created equal," says Rick Nahm, vice president for development and alumni relations at the University of Pennsylvania. Mr. Nahm says "needs-driven" campaigns that are based on good strategic plans will be far more successful than "donor-driven" campaigns, which are based on what fund raisers believe they can raise from donors.

Mr. Nahm points to such small colleges as Birmingham-Southern, Centre, Millsaps, and Rhodes, and Nebraska Wesleyan University as examples. "It's no accident that these are some of the most exciting institutions around today," he says. "The campaigns growing out of their strategic plans are making it possible for these schools to move up."

NEW AND SOPHISTICATED fund-raising techniques are also said to be driving goals higher.

► Fund raisers are conducting

FACT-FILE

Capital Campaigns to Raise $100-Million or More

	Goal	Public announcement	Scheduled completion date	Gifts and pledges as of June 30, 1987
Stanford University	$1,100,000,000	February 1987	October 1991	$ 372,000,000
University of Southern California	557,000,000	July 1984	July 1990	284,434,000
Columbia University	500,000,000	November 1982	December 1987	549,175,000
Johns Hopkins University	450,000,000	September 1984	December 1989	361,841,000
University of Miami	400,000,000	December 1984	December 1989	336,879,000
Ohio State University	350,000,000	May 1985	July 1990	234,258,000
New York University*	325,000,000	September 1984	August 1990	212,400,000
University of California, Los Angeles	300,000,000	November 1984	December 1988	248,211,000
NY Hospital-Cornell Medical Center	300,000,000	July 1982	December 1987	272,636,000
University of Minnesota	300,000,000	April 1986	June 1988	264,674,000
University of Notre Dame	300,000,000	May 1987	December 1990	216,815,000
Washington University (Mo.)	300,000,000	May 1983	December 1987	553,100,000
Columbia-Presbyterian Medical Center**	245,000,000	October 1985	December 1990	177,168,000
Tufts University	250,000,000	March 1987	March 1992	55,153,000
University of Pittsburgh	225,000,000	June 1987	June 1992	90,000,000
Indiana University	203,000,000	October 1985	June 1990	178,500,000
Boston University	200,000,000	October 1984	April 1989	172,300,000
Brandeis University	200,000,000	November 1986	June 1991	77,685,000
Carnegie Mellon University	200,000,000	April 1986	July 1991	99,342,000
Duke U. College of Arts and Sciences	200,000,000	December 1984	December 1989	105,000,000
Pennsylvania State University	200,000,000	September 1986	June 1989	144,600,000
Yeshiva University	193,000,000	July 1984	June 1988	153,000,000
Harvard University Medical School	185,000,000	October 1986	December 1991	80,000,000
Baylor University	170,000,000	January 1984	December 1992	51,000,000
University of Michigan	160,000,000	October 1983	December 1987	163,719,000
U. of Chicago C. of Arts and Sciences	150,000,000	April 1983	December 1987	128,500,000
University of Iowa	150,000,000	May 1987	December 1989	55,000,000
University of Utah	150,000,000	May 1987	June 1990	91,664,000
Georgia Institute of Technology	145,000,000	March 1984	June 1988	146,726,000
Pomona College	130,000,000	October 1982	June 1988	98,154,000
Brown University	125,000,000	February 1987	June 1989	53,503,000
Smith College	125,000,000	February 1987	December 1989	62,520,000
DePauw University	100,000,000	April 1983	June 1987	121,614,000
Mount Holyoke College	100,000,000	September 1986	December 1991	44,700,000
University of Oklahoma	100,000,000	November 1986	December 1990	40,200,000
Pace University	100,000,000	September 1987	December 1995	13,000,000
Pepperdine University	100,000,000	May 1984	December 1989	87,400,000
Rutgers University	100,000,000	November 1986	June 1990	75,618,000

* Goal represents the first phase of a three-phase campaign to raise $1-billion by the year 2000
** $135-million of goal also counts toward Columbia University's campaign for $500-million

TELEPHONE SURVEY BY THE CHRONICLE

much more research on prospective donors. Many are beginning to keep track of young alumni who start their own businesses.

► Colleges are packaging their needs more skillfully. A donor who would not want to contribute to the political-science department might be enticed into endowing a new center for public-policy studies.

► Campaign brochures are becoming slicker and their slogans more direct. "Many of the more sophisticated colleges now are opting for simplicity, as in: 'The Campaign for Dartmouth,' " says Bernice Thieblot, a consultant.

This year professional fund raisers—as opposed to trustees and volunteers—will conduct a far greater share of major-gift solicitations. When a campaign goal is set at more than $100-million, there is "instant recognition" that the job can no longer be done entirely by trustees and other volunteers, says Norman S. Fink, deputy vice-president for development and alumni relations of Columbia University.

He says more staff work has become necessary as planned gifts—bequests, trusts, life-income contracts, and gifts of property and insurance—have accounted for growing proportions of campaign totals, often a third or more of the goal.

The trend toward planned gifts does present some drawbacks, however. The majority of such gifts do not come to the college or university for 10 years or more, thus delaying the benefits of the campaign. In addition, fund raisers say deferred gifts make it too easy to back off from a request for cash.

Fund raisers also worry that even as life expectancies are going up, many colleges are lowering the age at which they will count the expected value of a bequest in their campaign totals. Where earlier campaigns counted only documented bequests from donors aged 75 or older, this year the University of Florida, for example, will count bequests documented by people aged 65 and up.

BRAKELEY, JOHN PRICE JONES, INC.

Fund raiser George Brakeley, III: "A sense of optimism has replaced the panic that was everywhere a year ago."

JOE PINEIRO, COLUMBIA UNIVERSITY

Norman Fink of Columbia University: "A campaign presents an opportunity to redefine a college's stature."

UNIVERSITY OF SOUTHERN CALIFORNIA

Roger Olson of the U. of Southern California: Capital campaigns will "play a growing role in long-term planning."

While top volunteers play a critical role in helping colleges begin and build relationships with major donors, it takes professionals to "unravel a donor's assets and construct an imaginative major gift," says Mr. Fink. For example, part of one $5-million gift to Columbia's campaign entailed liquidating the assets of a private foundation into cash and marketable securities. The balance of the gift came in the form of two gift annuities—one for a single-life and one for a two-life expectancy—constructed from stock in a closely held real-estate company.

A shortage of top volunteers who are capable of looking top prospects in the eye and asking for million-dollar gifts is also leading to an increased staff role. Officials at Princeton University estimated that they had only four "truly effective" volunteer solicitors at the start of the recent campaign that raised $410-million for the university, and about ten when it finished.

"This is a very significant increase—and, to me, probably the best thing to come out of this campaign," said Robert P. Roche, a fund-raising consultant to the university, in a book Princeton published about its campaign.

But many fund raisers see the growing staff role in major-gift solicitations as a bad development. "It has become harder and harder to attract top volunteers to solicit major gifts. Fewer of them seem to have the time," says one consultant.

Colleges no longer are organizing armies of volunteers to personally solicit large numbers of alumni for smaller gifts. Instead they are turning to telephone solicitation as a more cost-effective method of generating broad alumni participation in their campaigns. Sometimes they are turning the management of such efforts—often called phonathons—over to commercial telemarketing companies.

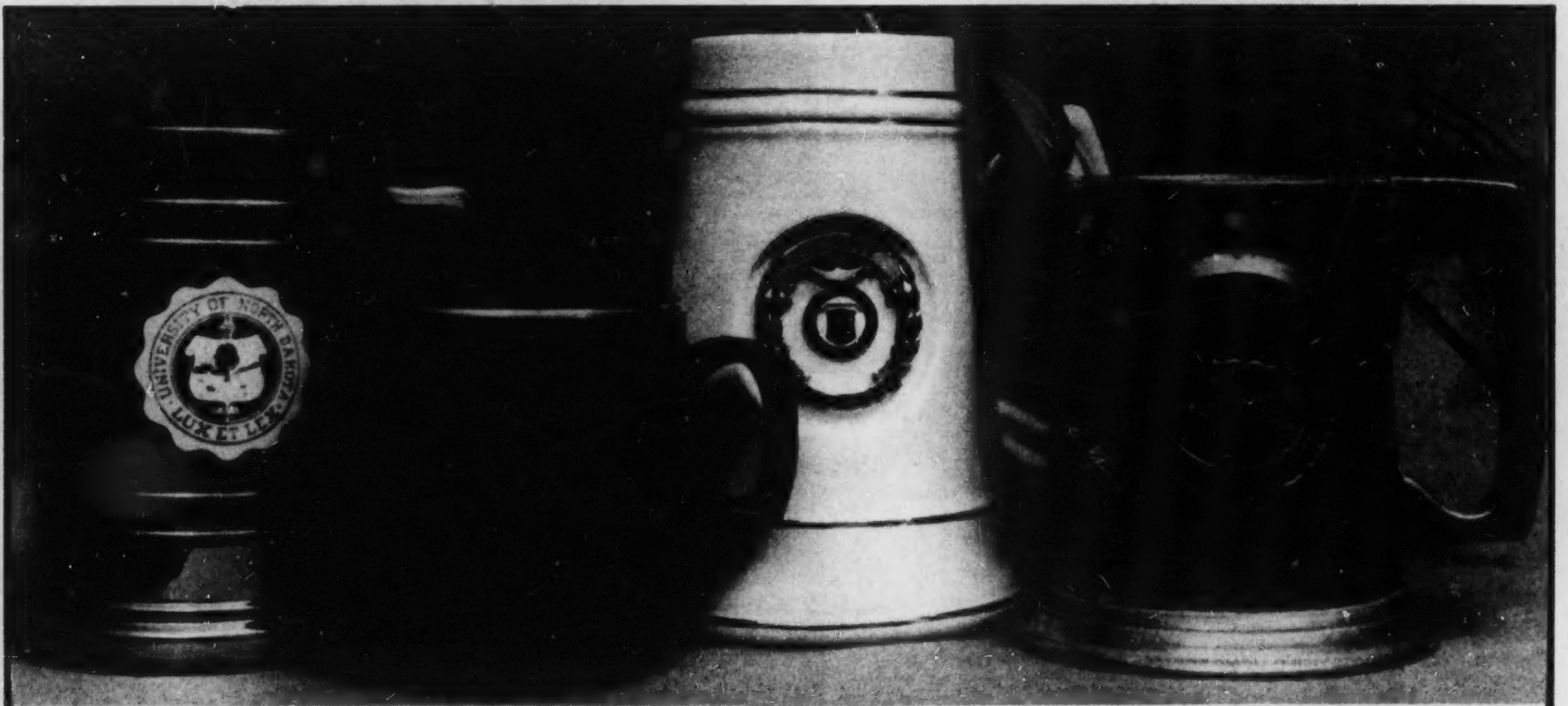
But some experts think phonathons—with the possible exception of those in which students do the asking—generate more ill will than cash support among alumni. "Phonathons are offensive and expensive," says one.

AS BIG AS CAPITAL CAMPAIGNS have become, experts think that gift income is holding steady as a portion of university budgets—at about 15 per cent for private and 5 per cent for public universities that have full-scale fund-raising operations in place.

But fund raisers are quick to add that those figures understate the importance of the money raised. A large portion of university revenues comes in the form of fees for services. Capital campaigns, on the other hand, bring in money that enables a college to make improvements.

While capital campaigns have become the engines that today are driving fund raising in higher education, experts say much more than money is involved.

"What's at stake is the status of the university—within higher education and outside, as well," says Mr. Fink of Columbia. "Today a campaign presents a significant opportunity to redefine a college's stature, as well as its mission and purpose."



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9/16/87 C2175-1

THE CHRONICLE
of Higher Education.

ISSN 0009-5982

September 16, 1987 • $1.95
Volume XXXIV, Number 3

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Scientists are searching for a drug to combat AIDS, amid complaints that many universities seem reluctant to join the effort. Page A4.

Political scientists disagree on the wisdom of turning public services over to private companies. Page A4.

"Desktop publishing" is becoming a popular method for producing newsletters and other material on campuses. Page A15.

A business professor at Yale University is planning his own corporate takeover. Page A15.

The transition to new leadership at the University of North Carolina has prompted debate about the governance of the system. Page A23.

Critics charge that efforts by the Reagan Administration to help historically black colleges are public-relations ploys. Page A23.

As requests for grants increase, Alcoa's director of corporate giving is limiting the causes his company will support. Page A33.

The influx of students with "hidden" handicaps is forcing colleges to provide a variety of new support services. Page A40.

A physical-education course at the University of Michigan is under scrutiny after two magazine articles questioned its rigor. Page A42.

The new rector of the University of Chile last week shut down the institution for 30 days. Page A43.

A nationwide strike by faculty members in India has been called off. Page A43.

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IN CUBA'S UNIVERSITIES: EMPHASIS ON QUALITY

UNIVERSITY OF HAVANA

Story on Page A43

Bennett to Candidates: Press Colleges to Raise Quality, Limit Tuition

By STACY E. PALMER

CHAPEL HILL, N.C.

Education Secretary William J. Bennett last week urged candidates for the Presidency to encourage colleges and universities to improve their quality and hold down tuition costs. The candidates, he said, should pay more attention to the needs of disadvantaged students and less attention to the National Education Association.

Mr. Bennett made his remarks as nine candidates for the Presidency were preparing for a forum on education at the University of North Carolina's campus here.

Ernest L. Boyer, president of the Carnegie Foundation for the Advancement of Teaching, also came here to give his advice to the candidates. He encouraged them to focus on improving the quality of teachers.

In his remarks, Mr. Bennett noted that many public-opinion surveys had shown that education is a top priority among vot-

Continued on Page A32

U. of Rochester Readmits Employee of Kodak Competitor

Professors in business school and trustees agree on action

ROCHESTER, N.Y.

The University of Rochester has readmitted an employee of a Japanese competitor of the Eastman Kodak Company, reversing an earlier decision to bar him from the business school.

University officials notified the employee, who works for the Fuji Photo Film Company, of his readmission hours after the Board of Trustees met to discuss the incident.

Saying it was a mistake not to have sought faculty consultation on the case, the trustees asked the business-school faculty to determine whether the Fuji employee should be admitted. Faculty members quickly decided to offer him admission.

One of Biggest Benefactors

Those actions followed the business school's decision last month to withdraw its offer to Tsueno Sakai after Kodak officials complained that his presence could threaten the company's trade secrets.

Kodak is one of the university's biggest benefactors. In addition, it supplies about 120 students a year to the William E. Simon School of Business Administration.

In a prepared statement issued after their meeting last week, the trustees said they needed "to defend the integrity of the University not only in fact but in perception."

Faculty members praised the board for its stand.

"I'm very pleased to hear what they did," said Michael C. Jensen, a professor of finance and business administration. "It may be a moot point, but it's very important that the university wound its way through this process."

The controversy began last month when university officials said they shared Kodak's concern about possible classroom

Continued on Page A34

Closing the Education Gap for Hispanics: State Aims to Forestall a Divided Society

By CHERYL M. FIELDS

LOS ANGELES

By the year 2000, Hispanics are expected to total more than a third of the population of southern California. Yet the educational attainments of Hispanics—the region's largest and fastest-growing minority group—lag far behind those of Asians and non-Hispanic whites.

The resulting gap poses what educators and economists acknowledge is a monumental task for California's educational institutions, from elementary schools through graduate-level universities.

If the institutions fail to help Hispanics bridge that gap, many observers warn that a divided society could develop, with an aging middle and upper class of "Anglos"—non-Hispanic whites—and a large

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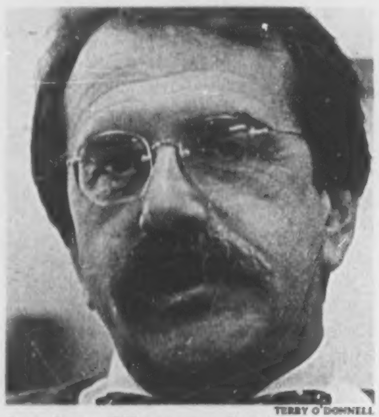

TERRY O'DONNELL

Juan Lara: "We are moving down the road of a citizenry unable to cope with the demands of the 21st century."

Best-Selling Book Makes the Collegiate Curriculum a Burning Public Issue

By MICHAEL W. HIRSCHORN

Shortly after *The Closing of the American Mind* was published in the spring, Allan Bloom said he hoped that, if nothing else, his book would bring the question of the role of the university to the forefront of intellectual debate.

Today, seven months after the University of Chicago professor's critique of contemporary students and the American system of higher education began its climb to the top of the best-seller lists, even Professor Bloom's strongest critics are conceding that his book has made the collegiate curriculum a burning issue both inside and outside the academy.

The Closing of the American Mind is already in its 16th printing, with 375,000 copies on the market, and was bumped only recently from the top spot to second place on the New York *Times* best-seller list. The book has been a *Times* best-seller for 20 weeks.

Secretary of Education William J. Bennett recalled that after a recent speech to a group of Republican grocers in the Midwest, the first question was: "Allan Bloom says that relativism is a terrible thing. Are

Continued on Page A22

UNIVERSITY OF CHICAGO

Author Allan Bloom: "I still think the issue is this profound relativism, where most people in universities don't believe in anything."

of Southern California, where he will be a visiting professor.

Semion Katz, whose specialty is seismology, is the fifth Jewish scientist to leave the Soviet Union through efforts of the university and Jewish leaders in Los Angeles. Permission to leave is still being sought for two others.

The university began to recruit the seven scientists in 1983, when the Soviet government moved to revoke their academic degrees after they applied to emigrate. The four who left previously are now teaching at Ohio State University, Princeton University, and U.S.C.

Fines Set for Violating Radioactive-Matter Rules

The University of California at San Francisco will be required to pay a fine of between $20,000 and $30,000 for a series of violations of regulations that cover the handling of radioactive materials, a state official said last week.

The university will be required to set aside an additional amount of money in case other violations are discovered, said the official, Asher Rubin, a deputy state attorney general. Negotiations are being held to determine the exact amount of the fine and the amount to be set aside.

The California Department of Health Services cited the university last spring for 33 violations involving the storage and disposal of radioactive materials, the training of employees, and record-keeping.

U. of Mass. Plans Events to Improve Racial Climate

The University of Massachusetts at Amherst has scheduled several campus events this fall that are designed to improve the racial climate on the campus.

The activities began with the opening freshman convocation and will continue until the October 27 anniversary of last fall's racial brawl on the campus, in which a group of white students chased and beat several black students. The incident occurred after the last game of the World Series.

James Langley, the university's director of public affairs, said the programs were designed to encourage students to deal with the issue of racism and intolerance and to appreciate the racial and ethnic diversity on the campus.

Mr. Langley said total minority enrollment in this fall's freshman class was expected to be about 400, an increase of more than 8 per cent over last year's.

Corrections

- In a classification of colleges and universities (*The Chronicle*, July 8), the Carnegie Foundation for the Advancement of Teaching incorrectly classified Tulane University. It should be in the category "Research Universities II."
- An excerpt from *Men in Feminism* (*The Chronicle*, "Mélange," September 2) was wrongly attributed to Paul Smith. The author is Cary Nelson, professor of English and criticism and interpretive theory at the University of Illinois at Urbana-Champaign.

PORTRAIT

Yale Men as High-Level Spooks: Historian Recounts Exploits

By MICHAEL W. HIRSCHORN

On a summer day in 1942, Wallace Notestein, a pre-eminent scholar of English history at Yale University, slipped into the suite of one Joseph Toy Curtiss, a young literature professor.

Professor Notestein closed the windows in the Jonathan Edwards College rooms, checked the doors to make sure no one was listening, and then told his younger colleague that he had received some instructions from his friend, William Donovan, the head of the Office of Strategic Services.

Passing himself off as a researcher for Yale's Sterling Memorial Library, Joseph Curtiss was to travel as an O.S.S. agent to Switzerland and gather much-needed information from Nazi-occupied Europe. Eventually, Mr. Curtiss went to Istanbul, maintaining his cover as a researcher and teacher at an American missionary school, while fellow Yalies set up a complex system to provide him with laundered money.

"Seldom has a project so clearly been part of an old-boy network," writes Robin W. Winks in his new book, *Cloak & Gown: Scholars in the Secret War, 1939-1961* (William Morrow and Company), which recounts the so-called Yale Library Project and the prominent roles Yale men played in intelligence efforts in World War II and afterward.

Mr. Winks is Townsend Professor of History at Yale and master of the university's Berkeley College. His book may strike some as being a product of the Eli old-boy network, as well.

But Professor Winks argues in his book and reiterated in a recent interview that Yale's extensive involvement in intelligence-gathering efforts—apparently, no college has produced more high-level spooks—makes it a compelling example of how and why a group of scholars became involved in the spy wars, first against fascism and then communism.

"Some reviewer somewhere said I seemed to imply that Yale won the war," Mr. Winks, a specialist on the British empire, said in the interview. "I don't have any such notion, nor do I suggest that Yale won the intelligence war."

Nathan Hale to George Bush

Speaking in perfectly modulated sentences, Mr. Winks explained: "I focused on Yale both because I knew I could get at the records and because I understand the environment. I don't understand the environment at Princeton and Harvard."

Nonetheless, the involvement of Yale with intelligence gathering is extensive and historic. Nathan Hale, whose statue greets visitors to the C.I.A.'s Langley, Va., headquarters, was a member of the Yale class of 1773. A Yale graduate, Henry L. Stimson, uttered the probably apocryphal phrase "Gentlemen do not read each other's mail" when he shut down the State Department's "Black Chamber" counterespionage operation in 1929. And Vice-President George Bush, a Yale graduate, was director of the C.I.A.

PHOTOGRAPH FOR THE CHRONICLE BY ROBERT BENSON

Historian Robin W. Winks: "Some reviewer somewhere said I seemed to imply that Yale won the war. I don't have any such notion, nor do I suggest that Yale won the intelligence war."

Mr. Winks has concerned himself with the gang of egghead, romantic misfits who populated the high-level ranks of the O.S.S. and the C.I.A. before intelligence gathering became what he sees as the province of computers, number-crunchers, and technical wizards it is today.

Some Had Crucial Roles

Many of the Yale academics had notable, if occasionally peripheral, roles in the war effort. A few, most notably James Jesus Angleton, played what Mr. Winks believes were crucial roles in the growth and development of American intelligence.

Angleton, whose life and exploits have insinuated themselves into countless postwar spy thrillers, is considered the father of American counterintelligence and is granted the most space in Mr. Winks's book.

"A man whose devotion to theory was virtually poetic," Mr. Winks writes, James Angleton spent most of his life working in elite, sheltered environments. He studied at an English public school and at Yale (where Mr. Winks tells us his grades wallowed in the lower 70's), and was stationed at X-2 counterintelligence in England during the war—living in a world "that treasured nuanced language and that used insider vocabularies of their own."

So, it was no surprise, Mr. Winks writes, that Angleton did not understand what he was saying when he told Sen. Frank Church's Senate Select Committee on Intelligence in 1975 that "it is inconceivable that a secret intelligence arm of the government has to comply with all the overt orders of the government."

Although taken as a bald statement that the C.I.A. was above the law, Mr. Winks argues it was uttered because Angleton feared, as he did throughout the postwar period, that a high-level mole had infiltrated the highest ranks of the United States government. "Obviously if a high official of the government were thought to be working on behalf of the Soviets, the agency might resist following an order from that official," Mr. Winks writes of Angleton.

A Fan of Mystery Fiction

Cloak & Gown first began to gel in the mind of Robin Winks in the early 1970's, following an argument with a colleague at Yale upon Mr. Winks's return from a two-year stint as the cultural attaché to the U.S. Embassy in London.

The colleague, who was critical of Mr. Winks for serving under President Nixon, also argued that "it was utterly inappropriate . . . for any scholar of whatever discipline to cooperate with the Central Intelligence Agency," Mr. Winks writes.

In light of the revelations about the agency in the late 1960's and early 1970's, Mr. Winks agreed, but argued that the agency was being hurt by its "inability to attract liberally educated men and women who knew that civic responsibility arose in good measure from a shared sense of morality."

The colleague responded that scholars had never cooperated with government intelligence, a statement Mr. Winks knew to be false. Already a fan of mystery and spy fiction, Mr. Winks then decided to write an account of academic involvement in espionage. He eventually narrowed the topic to Yale.

In researching the book, Mr. Winks was surprised at how willingly many of the old O.S.S. squad discussed their pasts. Tracking many of the main participants to England, France, Switzerland, and elsewhere, he found most of them willing to tell the truth—at least about the parts that cast them in a positive light.

80 Pct. of the Story

"I found that if I could go in with pretty precise questions of the kind that would reveal that I already knew 80 per cent of the story, most people would say, in effect, 'Well you've got it 80-per-cent right, but you're wrong on some details,' " he recalled in the interview. " 'But, since you've got it 80-per-cent right, we know you're going to tell the story anyway, so you might as well tell it right.' "

The project received nominal interference from the C.I.A., Mr. Winks said, with two exceptions. On one occasion, the C.I.A. refused a request in 1983 by A. Bartlett Giamatti, then Yale's president, to declassify some materials on Norman Holmes Pearson, the Yale scholar who headed counterintelligence at O.S.S. / London during the war.

Instead, Mr. Winks writes in a lengthy and exhaustive section of notes to the book, the C.I.A. sent two agents to Yale's Beinecke Library, where the documents were stored, and removed them.

A second incident, Mr. Winks recalled with a laugh, occurred when the book was nearing completion.

"I got a friendly phone call from a very top-level officer of the C.I.A., saying basically, 'Fascinating book you must be writing. Wouldn't you like us to read the manuscript and make sure there are no errors?' I said, 'Well, No, I wouldn't like you to read the manuscript, and I'll take responsibility for my errors,' and they said, 'Well, all right.' "

West Virginia's Colleges Lose Another Chancellor

CHARLESTON, W. VA.

West Virginia's troubled higher-education system is losing its second chancellor in less than two years.

Thomas W. Cole, Jr., announced last week that he would leave his position next spring to become president of Clark College, a historically black institution in Atlanta.

Mr. Cole said he was changing jobs only because of the opportunity to work at Clark. But some observers here said the chancellor's departure was another indication of the gravity of the problems facing West Virginia's public colleges.

Said Paul Nuchims, president of the West Virginia conference of the American Association of University Professors: "People are going to start to realize that they have a very sick animal here."

Mr. Cole's predecessor, Leon H. Ginsberg, resigned early last year at the request of the Board of Regents. Mr. Ginsberg had angered Republican Gov. Arch A. Moore, Jr., by organizing the legislative defeat of the Governor's plan to abolish the board. He had also upset college officials by telling them to make budget requests to the board, not to legislators.

Mr. Cole, who was serving as president of West Virginia State College at the time, was appointed acting chancellor in February 1986 and chancellor the following September.

A Tumultuous Year

His year in office has been tumultuous. Last spring, after Governor Moore ordered all state agencies to cut their budgets by 5 per cent, the regents said they would do so by ending the spring semester a week early. Following nationwide publicity, Governor Moore ordered the regents to keep the colleges open, using interest from college accounts to make up for the budget cut.

Shortly after that incident, newspapers here printed a report prepared by Mr. Ginsberg before he left that characterized the regents as inept and the college presidents as selfish.

Mr. Cole said he was leaving because of the opportunity he would have at Clark to increase black enrollments in higher education. About West Virginia higher education, he said: "It's been through a difficult period, but it's proceeding on course."

Others disagreed. Lyle Sattes, chairman of the House of Delegates Education Committee, said: "I can't fault him for leaving, but I wish he could have stayed longer. We've got some very chaotic times here, and we could really use some continuity."

Mr. Nuchims of the A.A.U.P. said: "When someone goes from being the chancellor of a state to run a small college, it shows the straits higher education is in." —SCOTT JASCHIK

Oregon Legislators Angered by Tuition Waivers for Athletes

SALEM, ORE.

Legislators here have strongly criticized higher-education officials for waiving $1-million in tuition payments for student athletes while saying that more funds were needed to give merit raises to faculty members.

Oregon's Legislative Emergency Board, a panel that acts for the entire Legislative Assembly between sessions, turned down a request that the State System of Higher Education be allowed to use a special $10-million appropriation for the merit raises even though the legislature had stipulated that most of those funds be used for across-the-board salary increases.

Legislators said they were angry that the State Board of Higher Education had voted to waive the tuition for student athletes at a time when the board was complaining about the lack of funds for merit increases for faculty members.

Oregon does not allocate state funds for college athletics.

'A Hardball Game'

"You are testing the decisions of the legislature," said Sen. Mike Thorne, co-chairman of the Joint Ways and Means Committee. "If you want to get into a hardball game, I'm willing to throw it fast, high, and inside."

William E. Davis, chancellor of the higher-education system, defended the board's decisions. On the faculty-salary issue, he said, "Across-the-board increases reward poor performance without rewarding outstanding service."

He said the board had always had the power to waive tuition for certain groups—as it did for some minority students this year—so it should not be criticized for waiving tuition for athletes in an effort to boost the state's sports programs.

Support from Governor

Mr. Davis acknowledged that relations with the legislature could be harmed by the sparring, but said he was confident that any ill will would be temporary.

"I'm always concerned about relations with legislators. But, professionally, it's our duty to present our needs to them," he said.

College officials said they were pleased that Gov. Neil Goldschmidt, a Democrat, supported them in the dispute with the legislature.

"The Governor's feeling is that there is a linkage between the athletic conference where a school belongs and its academic associations," a spokesman for the Governor said.

An editorial in *The Oregonian*, the state's most influential newspaper, called the tuition-waiver plan "educational junk food" and said it was "an insult to the state system's professors and to the students they teach." —SCOTT JASCHIK

Foreign Students Now at Mass. Colleges Exempted from Full-Cost Tuition Plan

BOSTON

Foreign students who are already enrolled in Massachusetts's 29 public colleges and universities won't be affected by a new law that requires foreigners to pay the full cost of their undergraduate education.

Under legislation signed last week by Democratic Gov. Michael S. Dukakis, however, those who enroll after October 1 will still face tuition increases that average between 20 per cent and 40 per cent.

The new legislation follows a bill that was passed in July to require foreign students to pay the full cost of their undergraduate education. Along with exempting foreign students who are already enrolled in state institutions, the new bill also allows tuition to be waived for needy foreign students.

Regents Oppose the Policy

While other states have in the past attempted to impose restrictions on foreign students in public institutions, the Massachusetts law is thought to be the first of its kind. The state's Board of Regents of Higher Education, which has consistently opposed the policy, plans to ask the state's Attorney General to determine whether it is constitutional to charge foreign students more than other out-of-state students.

Last year, there were 3,127 foreign students in the system. Under the new policy, which does not apply to graduate students, foreign undergraduates who enroll in the University of Massachusetts at Amherst after October will see their tuition increase to $6,984 from $4,320.

The new tuition policy has prompted debate in Massachusetts and other states. Supporters of the policy have argued that Massachusetts should no longer subsidize foreign students, especially those who can afford to pay. But critics contend that it will limit cultural diversity, and emphasize that it is very difficult to calculate the exact cost of a student's education.

—CAROLYN J. MOONEY

State U. of New York Trustees Back Salary Plan, Allowing Search for New Chancellor to Proceed

ALBANY

The Board of Trustees of the State University of New York system has approved a plan to raise top executive salaries, clearing the way for a chancellor's search that has been on hold for months.

In the past, the chancellor's salary was set by the Legislature, while other executive salaries were set by state agencies. The board tried unsuccessfully last year to persuade the Legislature to give it the authority to set salaries, by arguing that current levels made it impossible to recruit top executives for the 64-campus system. This year, the Legislature agreed to do so.

The departure of former SUNY Chancellor Clifton R. Wharton, Jr., who was earning $89,250 when he left in January, drew attention to the system's salary problem. Mr. Wharton left the chancellor's job to work for a reported $500,000 as head of higher education's leading pension companies.

The board then announced it would postpone its search until it had the authority to offer a new chancellor a higher salary. A salary comparison done by the board pointed out that presidents of most other large university systems earned much more—up to $198,500.

The new salary plan gives the SUNY board the authority to set the chancellor's salary and salaries for 32 other executive positions.

The City University of New York System, which was also given authority to set its executive salaries, is studying its salary system. —CAROLYN J. MOONEY

How Public Colleges and Universities Fared in the States in 1986-87

The following table compares enrollment trends and appropriations for higher education among the states.

The figures were compiled by Research Associates of Washington, which gathers information on state appropriations and demographics from state higher-education agencies and then tabulates it.

The information is based on appropriations, population, and enrollment figures for the 1986-87 academic and fiscal years.

In addition to the data printed below, the organization has released other information on state appropriations for higher education, the ability of state and local governments to raise tax revenue, and comparisons of data from the last 10 years.

Copies of the complete report, *State Profiles: Financing Public Higher Education 1978 to 1987*, are available for $18.50 from Research Associates of Washington, 2605 Klingle Road, N.W., Washington 20008.

	High-school graduates per 1,000 population	Public-college students per 1,000 population	Higher education as per cent of tax revenue[1]	State, local tax dollars per college student	Tuition factor[2]
Alabama	10.6	34.6	11.2%	$3,005	25.5%
Alaska	10.8	27.2	6.0	9,743	11.4
Arizona	8.6	37.3	10.1	3,639	20.3
Arkansas	11.2	24.1	8.7	3,438	23.4
California	9.1	36.7	10.9	4,667	9.6
Colorado	10.1	35.3	6.7	2,673	40.6
Connecticut	13.2	18.5	5.4	5,158	20.9
Delaware	11.5	34.4	10.7	4,314	40.4
District of Columbia	8.5	12.5	4.6	8,719	8.5
Florida	8.0	23.4	6.6	3,147	19.9
Georgia	10.3	21.2	8.2	4,387	22.7
Hawaii	11.9	26.9	12.9	7,876	7.5
Idaho	12.3	30.8	12.3	3,974	13.3
Illinois	11.5	30.4	7.5	3,567	19.2
Indiana	11.6	27.6	8.5	3,601	32.8
Iowa	12.9	33.0	8.9	3,561	30.6
Kansas	11.1	37.6	9.2	3,253	25.5
Kentucky	11.0	24.4	9.2	3,611	25.1
Louisiana	10.0	26.3	6.2	2,956	32.2
Maine	12.7	22.5	7.8	4,497	25.3
Maryland	12.1	32.5	7.7	3,495	29.5
Massachusetts	13.6	21.6	6.3	4,978	22.3
Michigan	13.3	35.3	8.1	3,631	34.1
Minnesota	13.4	38.3	8.7	3,854	23.0
Mississippi	10.6	32.4	9.6	2,684	32.9
Missouri	11.0	25.8	8.1	3,359	28.8
Montana	12.2	32.6	7.9	3,323	21.8
Nebraska	12.6	35.4	7.7	2,628	29.7
Nevada	9.4	22.9	7.1	4,122	20.8
New Hampshire	12.4	21.4	5.1	2,464	56.3
New Jersey	12.1	19.3	5.8	5,163	24.5
New Mexico	11.7	33.2	11.4	4,129	14.9
New York	10.8	23.8	6.3	5,852	15.2
North Carolina	11.0	38.2	13.1	3,841	13.8
North Dakota	11.9	44.3	10.6	3,145	28.2
Ohio	12.4	28.9	7.1	3,194	35.1
Oklahoma	10.4	34.8	7.3	2,586	19.8
Oregon	10.3	34.7	9.1	3,531	25.5
Pennsylvania	12.2	21.2	6.3	3,825	38.3
Rhode Island	10.5	28.3	7.5	3,893	29.1
South Carolina	11.1	24.1	10.5	4,509	25.5
South Dakota	11.8	25.1	6.5	2,601	30.9
Tennessee	10.4	23.8	11.1	4,453	23.6
Texas	10.3	31.9	8.1	3,031	21.3
Utah	12.2	33.8	10.5	3,867	21.8
Vermont	12.7	26.5	4.2	2,063	69.1
Virginia	11.1	32.3	9.9	3,672	28.8
Washington	10.9	34.1	9.0	3,550	22.3
West Virginia	11.5	27.0	7.1	2,926	28.1
Wisconsin	13.5	39.5	8.9	3,609	30.2
Wyoming	11.0	33.3	8.8	6,826	10.4

[1] Percentage of state and local tax revenue appropriated for higher education expenses.

[2] "Tuition factor" represents the percentage of revenue generated by tuition when compared to the total revenue for public higher education provided by state and local appropriations and tuition payments.

9/30/87 C2175-1

THE CHRONICLE
of Higher Education.

ISSN 0009-5982

September 30, 1987 • $1.95
Volume XXXIV, Number 5

News Summary

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Popular interest in the Vietnam War has surged, but despite rich new research materials, scholarly work on the war is far behind: Page 4.

Ten to twenty technology and research centers will be opened at universities by the National Science Foundation as part of an effort to improve U.S. competitiveness: Page 7.

A professor with AIDS said Kansas State University officials had told him that his employment would end next month: Page 11.

John Brademas, president of New York University, is credited with shaping national higher-education policy and improving his university: Page 18.

Spending on federal programs for students and colleges would rise slightly next year, under a bill approved by a Senate panel: Page 18.

Questions on the political character of philanthropy abounded at a meeting sponsored by the Institute for Educational Affairs: Page 27.

California's colleges are looking for ways to expand the pool of minority students who are interested in higher education: Page 31.

The University of Miami is trying to repair damage to its reputation caused by its football team's behavior last year: Page 35.

Britain's Margaret Thatcher, attacking a power base of the Labor Party, ordered control of polytechnic institutes and colleges turned over to the government: Page 39.

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GAPS PERSIST BETWEEN SEXES

Students from Most Minority Groups Improve Scores on College-Admission Tests this Year; Averages Stable

Students from most minority groups continued to improve their scores on the two national college-admissions tests this year, while the scores of whites dropped slightly. On both tests, large gaps persisted between the scores of men and women.

Average scores on the two tests remained comparatively stable.

On the College Board's two-part Scholastic Aptitude Test, the average score dropped one point on the verbal section, from 431 last year to 430 in 1987, but rose one point in mathematics, from 475 to 476. The S.A.T. is graded on a scale from 200 to 800.

Composite scores on the American College Testing Program's four-part test, the A.C.T. Assessment, fell one-tenth of a point, from 18.8 in 1986 to 18.7 this year. Scores on three of the four tests that make up the examination—English, mathematics, and social studies—also fell, in each case by one-tenth of a point. Scores on the natural-sciences examination were unchanged.

The average S.A.T. scores of all minority-group students except Hispanics have risen since 1985, the last time scores were reported according to students' ethnic background. A change in the questionnaire that accompanies the S.A.T. prevented the board from issuing detailed breakdowns of the 1986 results.

Over the two-year period, the scores of black students increased by five points on the verbal section of the test, to 351, and by one point on the mathematics section, to 377.

Mexican American students fell three points on the verbal section, to 379, and two points in mathematics, to 424. Puerto Rican students dropped from 368 to 360 on the verbal section and from 409 to 400 on the mathematics section. The new questionnaire for the first time included a category called "other Hispanic" students; test-takers who so described themselves received scores of 387 on the test's verbal section and 432 in mathematics.

Scores for American Indian students

Continued on Page A34

SAT Averages by Sex and Race

	Verbal section			Mathematical section		
	1985	1987	2-year change	1985	1987	2-year change
Men	437	435	− 2	499	500	+ 1
Women	425	425	0	452	453	+ 1
American Indian	392	393	+ 1	428	432	+ 4
Asian	404	405	+ 1	518	521	+ 3
Black	346	351	+ 5	376	377	+ 1
Mexican American	382	379	− 3	426	424	− 2
Puerto Rican	368	360	− 8	409	400	− 9
Other Hispanic	—	387	—	—	432	—
White	449	447	− 2	490	489	− 1
Other	391	405	+14	448	455	+ 7
All	431	430	− 1	475	476	+ 1

Note: 1986 data by racial and ethnic background not available.

SOURCE: THE COLLEGE BOARD

The ACT Assessment: Average Scores by Sex and Race

	English			Mathematics			Social studies			Natural science			Composite		
	1986	1987	Change	1986	1987	Change	1986	1987	Change	1986	1987	Change	1986	1987	Change
Men	17.9	17.9	0.0	18.8	18.6	−0.2	18.6	18.4	−0.2	22.7	22.8	+0.1	19.6	19.5	−0.1
Women	18.9	18.9	0.0	16.0	16.1	+0.1	16.9	16.7	−0.2	20.2	20.1	−0.1	18.1	18.1	0.0
American Indian	14.4	14.6	+0.2	12.1	12.5	+0.4	13.0	13.2	+0.2	17.7	17.8	+0.1	14.4	14.6	+0.2
Asian	18.0	18.2	+0.2	20.8	20.9	+0.1	17.4	17.7	+0.3	21.9	22.0	+0.1	19.6	19.8	+0.2
Black	14.0	14.4	+0.4	10.4	11.0	+0.6	11.7	12.1	+0.4	15.5	15.7	+0.2	13.0	13.4	+0.4
Mexican American	15.6	15.6	0.0	13.2	13.7	+0.5	13.7	13.9	+0.2	17.8	17.9	+0.1	15.2	15.4	+0.2
Other Hispanic	16.4	16.7	+0.3	15.1	15.5	+0.4	15.2	15.5	+0.3	18.9	19.3	+0.4	16.5	16.9	+0.4
White	19.2	19.1	−0.1	18.2	18.0	−0.2	18.6	18.3	−0.3	22.2	22.2	0.0	19.7	19.6	−0.1
All	18.5	18.4	−0.1	17.3	17.2	−0.1	17.6	17.5	−0.1	21.4	21.4	0.0	18.8	18.7	−0.1

SOURCE: AMERICAN COLLEGE TESTING PROGRAM

Colleges Shift Some of Their Skyrocketing Health-Care Costs to Employees

By KATHERINE S. MANGAN

Colleges once again are facing double-digit increases in health-care costs, despite their efforts in recent years to economize. As a result, faculty and staff members on some campuses are being forced to pick up a larger share of the expenses.

Many institutions have been hit with large increases in health-insurance premiums this year. Others got modest increases in their basic plans but expect jumps of 20 per cent or more next year.

Even colleges that tried to cope with the last big increases in health-care costs in the early 1980's—by putting into effect such changes as higher deductibles and mandatory second opinions by doctors—are braced for higher costs.

"They are escalating in spite of what we do," says Fred Bjorling, associate vice-president for personnel at Northwestern University. "We had the medical world reeling for a while, but there are ominous signs they're catching on."

Health-care costs tripled at many colleges between 1977 and 1985, and they continue to rise. The price of health insurance for a full-time employee jumped to $1,245 in 1985 from $415 in 1977 at 222 institutions that were surveyed by the Teachers Insurance and Annuity Association and College Retirement Equities Fund.

Northwestern, like many universities, has tried various approaches, including deductibles and co-payments, to keep its health costs down. A deductible is the amount of initial expense an employee must pay for covered services, while a co-payment is the portion of costs for covered services that participants must pay above any deductible amount.

In addition to paying the deductibles and co-payments, Northwestern employees are required to get authorization before entering a hospital for non-emergency treatment.

Employees who are covered by the plans have generally supported such efforts, according to Eric M. Friedlander, who chairs Northwestern's faculty-staff benefits committee. "The effect of these steps is to keep the costs down, and that's

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**ANXIETY
IN HONG KONG**

University professors in Hong Kong are concerned about the impact on academic freedom and university autonomy of China's 1997 takeover of the territory. Story on Page A39.

The Scholastic Aptitude Test: Average State-by-State Scores

	Proportion taking SAT*	Verbal		Mathematical	
		1986	1987	1986	1987
Alabama	6%	476	478	514	515
Alaska	30	445	445	479	479
Arizona	11	466	463	509	505
Arkansas	4	482	480	519	521
California	38	423	424	481	482
Colorado	17	466	466	514	514
Connecticut	69	440	439	474	473
Delaware	50	442	440	475	470
Florida	38	426	423	469	470
Georgia	49	402	400	440	440
Hawaii	47	403	404	477	477
Idaho	7	475	473	512	502
Illinois	14	466	463	519	521
Indiana	47	415	415	459	459
Iowa	3	519	515	576	574
Kansas	5	498	498	544	547
Kentucky	6	483	479	519	519
Louisiana	5	474	473	507	509
Maine	46	434	433	466	466
Maryland	50	436	437	475	477
Massachusetts	66	436	435	473	474
Michigan	11	462	459	514	513
Minnesota	7	482	472	540	531
Mississippi	3	485	487	516	521
Missouri	11	476	474	519	518
Montana	9	485	479	541	530
Nebraska	6	493	488	549	545
Nevada	17	445	439	485	484
New Hampshire	57	450	450	485	488
New Jersey	65	424	425	465	467
New Mexico	8	489	484	527	525
New York	62	427	425	471	469
North Carolina	47	399	400	436	438
North Dakota	3	508	509	556	558
Ohio	16	460	455	503	499
Oklahoma	5	487	486	521	520
Oregon	42	444	444	486	484
Pennsylvania	52	429	428	465	463
Rhode Island	61	432	433	466	465
South Carolina	49	395	397	431	435
South Dakota	3	531	513	567	563
Tennessee	8	486	487	521	524
Texas	32	419	416	458	459
Utah	4	506	503	541	540
Vermont	54	442	440	474	474
Virginia	51	435	434	473	473
Washington	19	461	455	502	496
West Virginia	7	462	458	502	496
Wisconsin	10	478	475	536	534
Wyoming	5	484	483	534	533
National averages	**38%**	**431**	**430**	**475**	**476**

* Percentages are based on the number of high-school graduates in 1982 and the number of high-school seniors who took the S.A.T. in 1982, the most recent year for which graduation figures are available.

SOURCE: THE COLLEGE BOARD

Minority-Group Students Raise Admission-Test Scores

Continued from Page A1

rose slightly over the two-year period, from 392 to 393 on the verbal section and from 428 to 432 on the mathematics section. Those for Asian American students rose from 404 to 405 on the verbal section and from 518 to 521 on the mathematics section.

White students' S.A.T. scores fell two points on the verbal section of the test, to 447, and one point in mathematics, to 489. Officials said one-fifth of the students who took the S.A.T. this year had reported they were members of minority groups.

On the A.C.T., the average results for minority-group students also increased. Blacks' composite scores rose from 13.0 in 1986 to 13.4 this year, while Mexican American students' climbed from 15.2 to 15.4 and Puerto Rican students' rose from 16.5 to 16.9. American Indian students' scores increased two-tenths of a point, to 14.6, and those of Asian American students from 19.6 to 19.8. The composite score for whites fell one-tenth of a point, to 19.6.

The A.C.T. composite score for women, unchanged from last year, was 18.1—or 1.4 below the average for men. The average for men was one-tenth of a point lower this year than last.

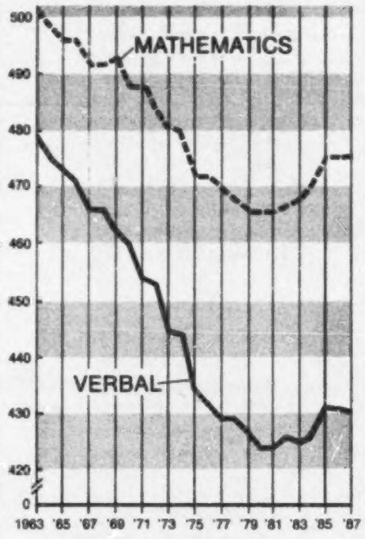
On the S.A.T., the gap between women's results and men's was largest on the mathematics section of the test, where women this year scored 453 and men scored 500—a 47-point difference.

The score for women was two points higher in 1987 than in 1986; the men's score fell one point.

On the verbal section of the test, the average score for women dropped one point, to 425, while the score for men fell two points, to 435.

More Students Take Tests

In announcing the S.A.T. results last week, College Board officials noted that average scores had held steady in spite of a substantial increase in the number of students taking the test—a factor that would normally be expected to push scores downward. Board officials said 1,080,426 high-school seniors took the S.A.T. this year, about 80,000 more than in 1986.



After more than a decade of decline, scores on Scholastic Aptitude Tests have steadied in recent years.

Donald M. Stewart, the board's president, said the increase was "an encouraging sign, since it means that a great many more students are actually considering going to college."

'An Insufficient Payoff'

A.C.T. officials said 777,444 members of the Class of 1987 had taken their organization's assessment, which is scored on a 1-to-36 scale.

In a statement, Secretary of Education William J. Bennett said: "Holding ground is better than losing ground, but we're still seeing an insufficient payoff for what we have invested in education."

He added: "We need better results. We need accountability for results." He said, however, that the increase in the number of students taking the test was "good news," as was the rise in scores of students who are members of minority groups.

John Weiss, executive director of FairTest, an advocacy organization that monitors the standardized-testing industry, said the rise in minority-group students' S.A.T. scores might be attributable in part to a New York State law enacted last year. The law requires testing companies to stop using the questions on which answers from black and white students vary most widely.

"Some of the most egregious items have been eliminated from their tests," said Mr. Weiss. "We believe this is a large reason for the increase in minority scores."

He added that the gap between men's and women's scores was "still outrageous." He said the tests, contrary to their makers' assertions, do not accurately predict women's first-year college grades.

Average scores on the College Board's 14 hour-long achievement tests, which are offered in individual disciplines, rose four points this year, to 544. That increase, too, was achieved despite a 4-per-cent increase in the number of students taking the tests.

Results on the Test of Standard Written English, which is given along with the S.A.T., rose by the equivalent of four points on the S.A.T. scale. The test is actually graded on a scale of 0 to 60+; this year's score rose four-tenths of a point, to 43.0.

Scores on the S.A.T. dropped from 1967 to 1980, and have since rebounded somewhat. The verbal score in 1967 was 466, and fell to 424 by 1980; the mathematics score decreased over the same period from 492 to 466. Between 1970 and 1976, composite A.C.T. scores fell from a high of 19.9 to a low of 18.3. For the past 11 years, they have fluctuated between 18.3 and 18.8.

Colleges in California Seek New Ways to Expand Pool of Hispanic Students

Continued from Preceding Page

cooperation with neighboring public and private universities.

The centers plan to identify talented students who should consider transferring and provide a place where counseling and printed information can be obtained about admissions requirements, application procedures, and financial-aid options at four-year institutions.

One of the most structured efforts designed to increase transfers is the "Transfer Alliance Program," run by U.C.L.A.'s Center for Academic Interinstitutional Programs in cooperation with 12 community colleges in Los Angeles County. Students in the program are guaranteed admission to U.C.L.A.'s College of Letters and Science if they complete a core of special honors courses, maintain a 3.0 grade-point-average, and meet other academic requirements.

Since the 1960's, the Legislature has financed several programs in the state's higher-education systems that provide special services for minority students after they enroll in college, including summer orientation programs for freshmen or transfer students, training in study skills, academic and personal counseling, and tutoring.

Report Blasts Programs

A report by the Educational Equity Advisory Council of the California State University system last year blasted some programs on its campuses. It said they lacked "a sustaining educational rationale" and had had too little impact on retaining minority students, despite the state's investment of about $70-million in them just within the past five years.

The report recommended that the 19 campuses in the system consider integrating their special programs into the overall campus structures for student services, and it stressed the importance of enlisting faculty members more directly as advisers and mentors of minority students.

Several campuses have begun some consolidation efforts in response to the report, says Mr. Carter of the California State University system.

The issue of consolidation is a very sensitive one, however, since administrators and other supporters of the existing affirmative-action programs believe they need to retain some separate "identity" to provide a comfortable campus base for minority students.

Says David Sandoval, director of the Equal Opportunity Program at the California State campus at Los Angeles: "No thorough research has been done to find out what has worked in the programs in the past and what hasn't. Some consolidation is probably necessary, but if the staff members of these separate programs are 'mainstreamed' around campus and not given the chance to do some of the things we are now doing and teach other staff members what we do, the students will suffer."

Genevieve M. Ramirez, coordinator of tutorial services at the California State campus at Long Beach, says that based on her study of student-retention programs there, it appears that Hispanic students would be better served if one office were made responsible for keeping track of all the special services each student received, and if a professional adviser were assigned to oversee closely each student's progress.

'Home Base' Needed

Many Hispanic students get lost in the system now, she says. Students coming into a large institution, she says, "require a 'home base' program and an individual staff member who takes responsibility for their general direction and progress.

"Hispanic students are usually unprepared either for the multiplicity of offices whose functions are not recognizably distinct, or for the myriad details of requirements, procedures, and expectations."

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Side-lines

A high-school basketball star, at the urging of his father, is making an unusual request of all college coaches interested in recruiting him: that they provide evidence about the state of minority life on their campuses.

Coaches who are interested in the talents of Jerrod Mustaf, a senior at DeMatha Catholic High School in Maryland, must answer a letter full of questions from Jerrod's father. Jerrod is expected to be one of the most sought-after high-school players in the country.

The questionnaire asks each coach for information about minority representation on the institution's faculty and among its tenured professors, the graduation rates of black students in general and black basketball players in particular, and minority representation on the athletic-department staff.

Thus far, coaches have said they support the questionnaire.

"A family would like reassurance on what's going on at a university, what's gone on with minority athletes in the past, and what's going to go on in the future," said Richard (Digger) Phelps, coach at the University of Notre Dame, one of the institutions that is most interested in the 6-foot-10-inch player.

Shaar Mustaf, the player's father, believes the information he gets from the coaches will play a significant role in his son's choice of college in the spring, which he said will be a family decision.

"I think it's a parent's right and responsibility," Mr. Mustaf says of his involvement in his son's decision. "When you're 18, you don't always know what's best for you. I hope we'll agree and he'll be happy. But I'm going to have some input. After all, I'm the one who's buying the pork chops and rice."

•

Elroy (Crazylegs) Hirsch, a former star football player and athletics director at the University of Wisconsin, was honored recently when a campus street was renamed for him.

The road, formerly Oakland Avenue, was dubbed Crazylegs Lane in honor of Mr. Hirsch's contribution to the university's sports program, on and off the field. The road runs alongside the university's Camp Randall Stadium.

Originally, supporters of Mr. Hirsch wanted to rename Campus Drive, the university's main street, in his honor, but that movement stalled when it was learned that the cost of changing all the necessary road signs would amount to $17,000.

So Mr. Hirsch had to settle for Crazylegs Lane, a non-residential street that's not quite the length of a football field. Only two small signs were needed.

For Mr. Hirsch, who also played professional football for the Los Angeles Rams, it was the thought that counted.

"I've had lots of thrills in my life, and this is one of the biggest," he said.

Athletics

U. of Miami Tries to Repair Damage to Its Reputation Inflicted by Football Players' Scrapes with the Law

19 rules changes this year aimed at orienting athletes to campus and ending 'embarrassing' incidents

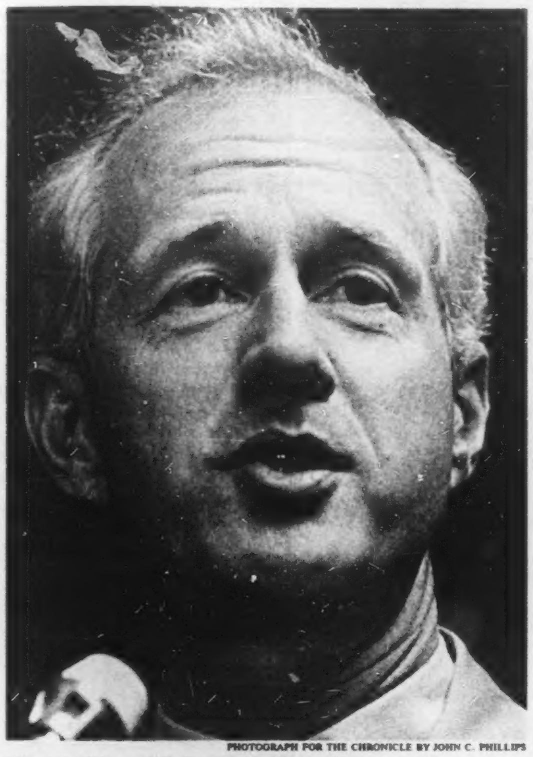
CORAL GABLES, FLA.

"It was embarrassing."

So says Edward T. Foote, II, president of the University of Miami, about the spate of widely reported scrapes with the law, some of them involving criminal charges, that hounded the Miami football team last season.

"It was also rather bitterly ironic," he adds. "That was an outstanding football team, but instead of celebrating the joys of victory, we spent much of the season making apologies for off-the-field behavior."

There was no question that "some players got into trouble and did things in violation or apparent violation of the law," he says. "There's no ducking that. We can't blame that on the media or anyone else. There were some mistakes made."



PHOTOGRAPH FOR THE CHRONICLE BY JOHN C. PHILLIPS

Miami's Edward T. Foote, II: "One thing we learned is that we really were not preparing very young men for the pressure."

Frustration Is Shared

Mr. Foote says he understands what athletics can lend to a university. "If the image of athletics is one of quality and integrity," he says, "that image then translates out and can be beneficial. It can open the door to the rest of the institution. It can increase your visibility as a university."

Conversely, he says, "I think that the negative publicity did some damage to our image in a quick and surface way. But any thoughtful person who looks at the allegations objectively will say there were troubles here and mistakes there, but there is still an awful lot to say good about the place."

Mr. Foote's frustration is shared by Sam Jankovich, Miami's athletic director. "It was a very unfortunate rash of negative publicity," he says. "I really believe that in the four years I've been here, we've definitely tried to do our business the right way, and in all areas we've really set out to really improve this athletics department—and we've done so for the most part."

Stung by the critical headlines and an increasingly unsavory reputation, Mr. Foote appointed a "task force" last fall to study the athletics program and recommend ways to improve it and prevent a recurrence of last year's rash of difficulties. The panel made 19 recommendations, all since adopted by the university, and noted that athletes had not been involved in incidents of misconduct disproportionate to their numbers.

Among other things, the committee urged the university to give players a more thorough orientation to campus life—through contact with the dean of students, housing officials, police officers, and reporters.

The university also adopted a code of conduct for athletes and published a handbook that spells out how athletes should act, and even how they should dress.

In addition, the university is making a special effort to integrate athletes into general student life, Mr. Foote says, after the committee noted that many of them expressed a sense of isolation on campus.

'Extraordinary Stress'

"One thing we learned is that we really were not preparing very young men for the pressure, the expectations, and the demands of some of the extraordinary stress of being in an intercollegiate athletics program like ours," Mr. Foote says. "Some of them didn't really think about how their behavior would reflect on teammates and the team."

Some players did not consider how their behavior would affect the rest of the university, either, says James L. Ash, Jr., vice-provost and a member of the panel that reviewed athletics. "We take student misbehavior seriously," Mr. Ash says. "But we did find that when athletes misbehave, the additional visibility they have makes it reflect poorly on the institution."

The panel, Mr. Ash says, chose to broaden its inquiry beyond questions of misbehavior. It looked at "other areas that affect athletes: the codes of conduct and rules they abide by, including N.C.A.A. rules, rules that apply to students, and rules that apply to residence halls," he says. "We thought it in the interest of the university to take a broader view of the situation."

'Tired of Hearing About It'

Most of the panel's recommendations stemmed from their review of those rules, Mr. Ash says. "I do not think we will succeed in eliminating misbehavior among undergraduates by any set of rules," he says. "However, I do think that the recommendations will produce a positive result."

Debbie Morgan, editor in chief of the *Hurricane*, the university's student newspaper, says that the football players' separation from mainstream student life has created some resentment among other students, many of whom feel that players receive special treatment.

The negative publicity of a year ago only

Continued on Following Page

NCAA Forms Foundation to Give Scholarship Aid to Athletes Whose Eligibility Has Expired

MISSION, KAN.

The National Collegiate Athletic Association, given a financial boost by a lucrative television contract for its Division I men's basketball championship, is establishing a new foundation to give scholarship aid to athletes whose eligibility has expired but who have not yet graduated.

The N.C.A.A. will contribute a starting grant of $6.8-million to the fund, known as the National Collegiate Foundation, from the association's record-setting 1987-88 budget. The budget, totaling $79,425,000, is more than $22-million larger than last year's. Virtually all of the increase comes from a new $55-million-a-year television contract for the Division I men's basketball tournament.

The association also contributed $2.3-million to the new foundation from its 1986-87 surplus. It plans to add $1-million more in 1989 and 1990.

Although the foundation's formation was approved in August by the N.C.A.A.'s executive committee, details about how it will work and exactly who will be eligible for aid have not yet been formulated.

Louis J. Spry, the N.C.A.A.'s controller, said only that the money would be used to help male and female basketball players complete their undergraduate degrees if they had failed to do so while athletically eligible.

'Long Been a Felt Need'

The N.C.A.A. has traditionally been puzzled over how to help such athletes, officials said.

"There's long been a felt need to provide a service for those who have demonstrated the capacity to earn a degree, but haven't done so while on scholarship and don't have the financial resources to con-

Continued on Page A38

NCAA to Aid Athletes Whose Eligibility Has Expired

Continued from Page A35

tinue in school," said Albert M. Witte, a professor of law at the University of Arkansas and a member of the N.C.A.A.'s executive committee. "Now, with this money from the basketball tournament, we have the funds to reach them directly and tangibly. The timing is just right for a plan like this."

One of Several Steps

The scholarship foundation is one of several steps the N.C.A.A. is taking to make sure that much of the additional revenue from the Division I basketball tournament is returned directly to its member institutions and their students.

The championship tournament now accounts for 81.2 per cent of all association revenues.

The association noted, in announcing its 1987 budget, that it will return 68.9 per cent of this year's anticipated income to its member institutions or their students, a total of more than $54-million.

Last year, the association distributed $33.1-million to institutions or students.

The institutions participating in the Division I men's basketball tournament will receive $7.4-million more than they did last year in the distribution of receipts.

Participants in other association championships will be allocated some $1.4-million more than they received in 1986-87.

The N.C.A.A. is also allocating an additional $950,000 for a new insurance plan that will cover member institutions if any of their athletes suffer catastrophic injuries.

It also is dramatically increasing the amount of money it will contribute to postgraduate scholarships for athletes, from $180,000 in 1986 to $600,000 this year.

—DOUGLAS LEDERMAN

NCAA Budgeted Spending, 1986 and 1987

	1986	1987	Change
Division I men's basketball distribution	$24,735,900	$32,150,700	+ 30%
Grant to National Collegiate Foundation	—	6,800,000	n/c
Transportation to championships	4,595,700	4,666,200	+ 2%
Communications department	3,186,000	2,825,650	− 11%
Championships: administration	2,840,700	3,990,000	+ 40%
Championships: per-diem allowances	2,497,900	2,955,400	+ 18%
Grant to Division II and III reserves	2,400,000	3,100,000	+ 29%
Drug testing and education	2,085,000	1,965,000	− 6%
Compliance and enforcement department	2,036,000	1,964,500	− 4%
General	938,200	1,394,100	+ 49%
Legal services department	1,700,000	1,500,000	− 12%
Publishing department	1,604,000	1,867,300	+ 16%
Championships department	1,083,000	1,043,700	− 4%
Funded operating reserve	1,000,000	1,000,000	0%
Committees	989,000	1,272,000	+ 29%
Administration department	977,000	1,503,900	+ 54%
Insurance: catastrophic	—	947,000	n/c
Other championships distributions	784,200	2,170,700	+177%
National Forum	—	950,000	n/c
Legislative services department	715,000	737,700	+ 3%
Rent	840,000	732,000	− 13%
Contingency	135,400	686,250	+407%
Business department	644,000	639,200	− 1%
Development	571,000	597,200	+ 5%
Insurance: general and liability	560,000	692,530	+ 24%
Royalties to members	281,000	674,000	+140%
Postgraduate scholarships	180,000	600,000	+233%
Total expenditures	$57,379,000	$79,425,000	+ 38%

n/c—not comparable

SOURCE: N.C.A.A.

Athletics Calendar

Meeting

December 8-10: Business. Athletic Business conference, Bally's Hotel, Las Vegas. Contact: Melanie Bingham, Athletic Business Magazine, 1842 Hoffman Street, Suite 201, Madison, Wis. 53704; (608) 249-0186.

Championships

October 30-November 1: Field hockey. Canadian Interuniversity Athletic Union, York U.

November 6-7: Field hockey. National Junior College Athletic Association, Champlain College.

November 7: Men's and women's cross-country. Canadian Interuniversity Athletic Union, U. of Victoria.

November 13-14: Field hockey. Division III, National Collegiate Athletic Association, site to be determined.

November 14: Men's and women's cross-country. National Junior College Athletic Association, Johnson County Community College.

November 14-15: Men's soccer. Canadian Interuniversity Athletic Union, McGill U.

November 14-15: Women's soccer. Canadian Interuniversity Athletic Union, Concordia U.

November 14-15: Women's soccer. Division III, National Collegiate Athletic Association, site to be determined.

November 19-21: Women's volleyball. National Association of Intercollegiate Athletics, U. of Wisconsin at Milwaukee.

November 19-22: Men's and women's soccer. National Junior College Athletic Association, Mercer County Community College.

November 20-21: Women's soccer. National Association of Intercollegiate Athletics, Erskine College.

November 21: Football. Canadian Interuniversity Athletic Union, U. of Toronto.

November 21: Men's and women's cross-country. National Association of Intercollegiate Athletics, U. of Wisconsin at Parkside.

November 21: Men's and women's cross-country. Division II, National Collegiate Athletic Association, U. of Southern Indiana.

People in Athletics

Thomas H. Diehl, women's basketball coach at Susquehanna U., has resigned.

Robert A. Dowd, associate athletic director at Southeastern Massachusetts U., to athletic director.

Gerald Gurney, assistant athletics director for academic affairs at Southern Methodist U., to assistant athletics director for academic programs at U. of Maryland at College Park.

Steven A. Schallenkamp, former men's and women's cross-country coach at State U. of New York College at New Paltz, to men's and women's cross-country coach at Bard College.

Doug Single, athletic director at Northwestern U., has resigned.

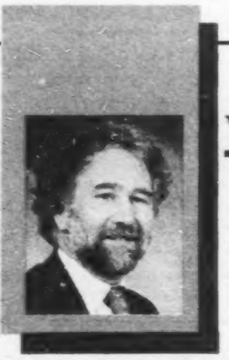
Gene Slaughter, athletic director at Capital U., has resigned.

Thomas Suitts, former men's basketball coach at Rice U., to men's basketball coach at Chicago State U.

Jeffrey Vennell, athletic director and men's soccer coach at Kenyon College, to director of sports and recreation at U. of Rochester.

Mari Wadsworth, assistant athletic director at Mount Saint Mary's College (Cal.), to athletic director.

Richard L. Whitmore, Jr., men's basketball coach at Colby College, also to athletic director.



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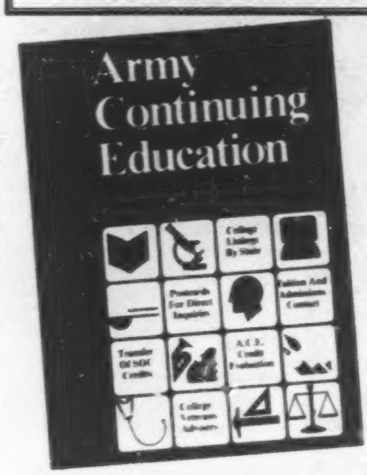

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ISSN 0009-5982

October 14, 1987 • $1.95
Volume XXXIV, Number 7

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Opinions differ over recommendations by trustees of higher education's pension companies on reorganizing investment opportunities of retirement accounts: Page A14.

A modern odyssey: From Colorado business professor to linebacker for the New York Giants: Page A15.

Concern over the quality of trade schools has led the Education Department to look into whether the institutions accurately represent the programs they offer: Page A21.

Bowing to pressure from higher-education groups, the National Association of College Stores has ended a Congressional lobbying campaign: Page A21.

In a settlement of a contested will, six institutions will receive most of the $150-million left to them by George W. Woodruff: Page A33.

More and more students are going to journalism schools to study public relations, advertising, and marketing: Page A35.

In campus discipline cases, professors and coaches disagree over whether athletes are favored or victimized: Page A37.

African universities need new sources of funds to avoid poor teaching and overcrowding, Zambia's education minister says: Page A39.

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ULTIMATE SYMBOL OF EXCELLENCE

In Sciences, the Reflected Prestige of the Nobel Prize Extends Far Beyond Anything Its Creator Imagined

By KIM McDONALD

When the announcement came that James M. Buchanan had won the 1986 Nobel Memorial Prize in Economic Sciences, faculty members at George Mason University could barely contain their enthusiasm. Here, finally, was proof that their little-known state institution was on the way to becoming a major research university.

"It was a real boost to our morale," says Karen I. Vaughn, chairman of George Mason's economics department, where Mr. Buchanan is a professor. "It was such a nice affirmation of our academic quality. When the president of the university threw a reception to honor Jim, I couldn't believe the number of people who showed up. Here were all these faculty members who didn't know Jim Buchanan from a hole in the wall, and they were grinning from ear to ear waiting to shake his hand. It was as if he had done it for all of us."

As the ultimate symbol of excellence, the Nobel Prize has had a tremendous effect on scholars, institutions, and national pride.

Its influence is particularly pronounced in the sciences, where its prestige has grown far beyond even the most hopeful dreams of its creator.

Alfred Nobel, the Swedish inventor of dynamite, wanted the prize bearing his name to reward those who had "conferred the greatest benefit on mankind." He stipulated in his will that awards, supported by proceeds from his estate, be made to living individuals, without regard to national origin, in each of five categories: chemistry, physiology or medicine, physics, literature, and peace. Nobel had hoped that his prize would stimulate progress in those disciplines—fields that he believed would most benefit mankind.

A sixth prize, the Nobel Memorial Prize in Economic Sciences, was established in 1968 by the Central Bank of Sweden.

Other scholarly awards have sought to make the same impact. A few even provide more than the approximately $345,000 that will be given in each of the Nobel categories this year. But none has ever approached the prestige and status that comes from winning a Nobel Prize.

Those who are named this week to receive the prizes in chemistry, physics, and physiology or medicine will find their lives forever changed. The in-

Continued on Page A6

Hughes Plans $30-Million for Undergraduate Science; 94 Colleges Invited to Apply

By LIZ McMILLEN

BETHESDA, MD.

Undergraduate science education at liberal-arts colleges and historically black institutions will be the focus of a $30-million program of grants announced here last week by the Howard Hughes Medical Institute.

Institute officials said they had invited 94 colleges to submit proposals to strengthen their biology, chemistry, mathematics, and physics programs. The awards, which will range from $500,000 to $2-million, will be announced next spring.

Part of $500-Million In Spending

The grants for science education are the first part of $500-million in expenditures that the institute will make over the next 10 years, following the settlement in March of a long-standing tax dispute.

Announcing plans for the first year of its grant-making activities last week, the institute also said it would finance up to 300 postgraduate fellowships in the biological sciences. They will be available to Americans and students from foreign countries.

In addition, the institute plans to award grants to help increase public understand-

Continued on Page A33

Ala. Court Ruling Seen Making Segregation at State Colleges More Difficult to Prove

By SCOTT JASCHIK

A federal court's ruling last week may severely limit the ability of the federal government and civil-rights activists to prove that some state systems of higher education remain racially segregated.

The ruling, by the U.S. Court of Appeals for the 11th Circuit, came in a case involving Alabama's higher-education system. The court held that the Justice Department had failed to prove that Alabama's public colleges and universities were segregated because the department had argued that the entire state system was segregated, instead of offering evidence that specific programs receiving federal money at various public colleges had violated the anti-bias laws.

Civil-rights experts said the decision, if upheld, could alter most of the 18 desegregation cases now being pursued by the U.S. Departments of Justice and Education. In all of those cases, the departments have charged systems or institutions, rather than individual programs, with segregation. Proving discrimination in individual programs would be more difficult, time-consuming, and expensive, the observers said.

'More Complicated than Antitrust'

"This could turn civil-rights cases into accounting cases," said Joe R. Whatley, a lawyer for Alabama A&M University, a historically black institution that was one of the parties that sued the state in the Alabama case.

"It makes what ought to be a simple, straightforward question of civil rights into a very complicated, money-tracing issue. It will become more complicated than antitrust cases," he said.

The Circuit Court's decision overturned a U.S. district judge's decision that Alabama's colleges and universities were illegally segregated. The Circuit Court based its opinion on the 1984 Supreme Court decision known as *Grove City College* v. *Bell*. In that ruling, the Court found that the Department of Education could not

Continued on Page A30

Higher Education Thrives as N.J. Economy Booms

New Jersey's economy has blossomed recently—and higher education, too, has been transformed by a steady determination and statewide collaboration. Page A20.

MARGINALIA

From *Gerontology News*, a newsletter of the Gerontological Society of America:

"The Institute of Gerontology seeks a fulltime PhD (or nearly so) . . ."

Not someone who just dabbles at it?

■

Item in the *Daily Egyptian*, the newspaper at Southern Illinois University at Carbondale:

"A $200,000 fund drive is scheduled in celebration of the two-millionth volume to be received at Morris Library this year. . . . Money raised during the campaign will further provide income for the future of the library.

"It is impertinent for students 50 to 75 years from now to be able to use materials purchased by the library such as newspapers, books and maps," he [the dean of library affairs] said."

Impertinent, if not downright impudent.

■

From *Computing in the Humanities*, a newsletter published at the University of Wisconsin at Stevens Point:

"While computer literacy continues to spread across campus, there is still a feeling among many relatively new users that they are and can only be surrogates, the nurturers of programs created by computer programmers (the real computer people). Conversely, a certain mystic attaches to those who mastered enough Pascal, C, or BASIC to make the computer perform some fundamental operations."

That's Joe, the programmer, and we don't know why he hangs on that way.

■

Headline in the North Carolina State University *Official Bulletin and Calendar:*

SCHOLARLY EXCELLENTS
TO BE HONORED

And the awfuls will be exposed to ridicule.

■

From a news story in the Indiana University alumni magazine:

"At their June meeting the Trustees approved construction projects on several campuses:

"A $6 million university center and classroom building on the Kokomo campus;

"Almost $22 million for Phases II and III of the Chemistry Building project in Bloomington;

"A $9 million project for the laboratory / classroom wing of Tamarack Hall at Northwest; and

"Almost $20 for Phase II of the Science / Engineering and Technology Building at IUPUI. . . ."

It's all they had left, probably.

—C.G.

In Brief

Law Dean Is Cleared in Biden Transcript Leak

Syracuse University officials have cleared a former law dean, Craig Christensen, of any responsibility for leaking details of Sen. Joseph Biden, Jr.'s, plagiarism record in law school.

In a statement, university officials said they were "completely satisfied his files have been and remain secure."

Mr. Christensen had been accused of disclosing confidential information about Mr. Biden's record at a dinner with three other law-school officials last month. News accounts of the plagiarism helped derail Mr. Biden's Presidential campaign.

Mr. Christensen has denied making any specific mention of the plagiarism episode.

Mr. Biden received an F in a law-school course for submitting a paper that included five pages of unattributed material taken from a law-review article. Mr. Biden, who said he had inadvertently omitted a footnote, repeated the class and received a B.

5 at the Citadel Indicted in Cadet Hazing Incident

A county grand jury has charged five cadets at the Citadel, a military college in South Carolina, in connection with the hazing of a black classmate last year.

The students were indicted on a misdemeanor charge of illegally wearing a mask. The offense comes under a rarely used state law designed to curtail Ku Klux Klan–type activity. The law carries a maximum penalty of a $500 fine and a year in jail.

The charges stemmed from a hazing incident last fall in which the five cadets, dressed in white sheets and towels, entered the room of the freshman, Kevin Nesmith, muttering obscenities, and left behind a charred paper cross.

The 13-member grand jury declined to indict the students on a second count of placing a burning or flaming cross in a public place.

Although he called the offenses serious, Charleston County Solicitor Charles Condon said he would drop the charges if the students agreed to enter the state's pretrial-intervention program, which would require them to perform 80 hours of community service and tour the state's prison system.

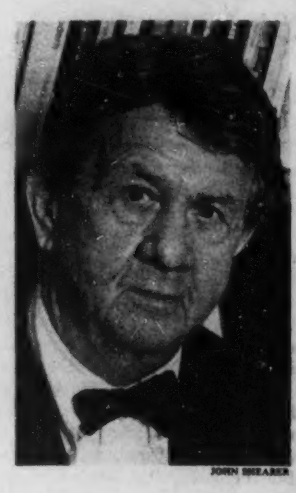
Los Angeles Chancellor to Retire in December

Leslie Koltai, chancellor of the Los Angeles Community College District, has announced that he plans to take early retirement in December, when he will step down with six months remaining on his contract.

Mr. Koltai, 56, had been under pressure from a new majority on the district's governing board. He has been chancellor for 15 years.

Mr. Koltai came under fire in the last two years for recommending that hundreds of permanent faculty members be laid off to resolve budget problems in the system, which is the nation's largest community-college district. In June, the American Federation of Teachers Faculty Guild (A.F.L.-C.I.O.) supported a three-candidate slate that defeated two incumbents and gave Mr. Koltai's critics control of the board.

During the session at which Mr. Koltai announced his retirement, the board voted to give faculty members a 7-per-cent salary increase, their first in three years.


JOHN SHEARER

Columbia U. Professor Wins Case to Clear Name

Penn T. Kimball (*above*), a 71-year-old retired Columbia University journalism professor, has won a widely publicized battle against government charges that he was a disloyal American and a dangerous national-security risk (*The Chronicle*, June 13, 1984).

In settling the $10-million lawsuit, filed in 1984 against the F.B.I., the C.I.A., and the State Department, the federal government acknowledged there was no evidence indicating Mr. Kimball or his late wife, Janet, had ever been disloyal to the United States. The government promised to destroy its file stating the contrary, and Mr. Kimball has dropped his claim for damages.

Mr. Kimball, a journalist who served as an adviser to the former Governor of New York, W. Averell Harriman, and former Sen. William Benton of Connecticut, discovered the charges made by anonymous informants when he requested his files under the Freedom of Information Act.

Mr. Kimball published a book in 1983 about his case, which was also the subject of a television documentary.

"I'm glad to be vindicated," he said. "But I don't think a citizen should have to go to such lengths to force the government to be more accountable for false accusations compiled in its classified files."

Victim of Alleged Rape Sues U. of California

A $15-million damage suit has been filed against the University of California at Berkeley and four football players by a female student who claims the athletes raped her in a dormitory on the campus last year.

The Alameda County district attorney's office said it had found insufficient evidence to file charges in the case. However, a campus student-conduct committee disciplined the players, requiring them to write letters of apology, undergo psychological counseling, and perform 40 hours of community service.

The incident drew wide attention, prompted student protests over the handling of the charges, and led to a campus program to alert students to the potential of "date rape" and other sexual abuses of women.

The players admitted having sexual relations with the woman, but denied she had been forced to take part.

The suit also names six university employees and a former male student.

The university said it would

Earthquake-Area Universities Pick Up the Pieces; Damage at One Campus Is Close to $30-Million

LOS ANGELES

California State University at Los Angeles reopened last week after being closed by an earthquake that damaged many colleges and universities in the Los Angeles area.

The university's campus, just east of downtown Los Angeles, had been closed for seven days to begin repairing nearly $30-million in damage. A student at the university was killed when part of the wall of a parking structure (*right*) fell on her.

Several other colleges in the area were closed temporarily after the earthquake, which registered 6.1 on the Richter scale. Many sustained severed water and gas lines, broken windows, cracked plaster, and other damage. Six of the 19 campuses in the California State University system reported being damaged by the earthquake.

One large classroom building and parts of several other buildings at California State at Los Angeles remained closed until repairs could be made.

About 70 per cent of the shelves in the university's library were damaged by the temblor. Two science buildings were hit by a fire caused by a chemical explosion and by chemical spills that the earthquake triggered.

The main quake was followed by a series of aftershocks that added to the damage. One registered 5.5 on the Richter scale.

—JACK McCURDY

WIDE WORLD

The Chronicle of Higher Education (ISSN [illegible]) is published weekly except the last two weeks in August and the last two weeks in December, at 1255 Twenty-Third Street, N.W., Washington, D.C. 20037. Subscription rate: $50 per year ($51 if bill is to be sent). Second-class postage paid at Washington, D.C., and at additional mailing offices. Copyright © 1987 by The Chronicle of Higher Education, Inc. Printed in the United States of America. POSTMASTER: Send address changes to The Chronicle of Higher Education, P.O. Box 1955, Marion, Ohio 43305. Member, Audit Bureau of Circulations. The Chronicle reserves the right not to accept an advertiser's order. Only publication of an advertisement shall constitute final acceptance of the advertiser's order.

At 427 Institutions, 60 Pct. of Loan Money Found to Be Overdue

WASHINGTON

More than 60 per cent of the federal money loaned to students at 427 postsecondary institutions across the country has not been repaid on time, according to a study of student-loan defaults.

The study is the first to examine the repayment of Guaranteed Student Loans at each of the 8,300 postsecondary institutions whose students have received guaranteed loans. It is also the first to offer a comprehensive listing of the proportion of student loans in default in each state.

Most Are Proprietary Schools

The study was a joint project of the National Conference of State Legislatures and the National Governors' Association. It found that most of the 427 institutions with more than 60 per cent of their student loans in default are proprietary schools. As a result, the states with the highest proportions of loans in default generally are those with large numbers of private trade schools. A report on the study said the government should consider cutting off loan money to students at trade schools where many former students have defaulted.

"Something is going on at these schools," said Mark Wolfe, who conducted the study. "Either their admissions standards are too lax or they are not counseling students. I find it hard to believe that half the student body is irresponsible."

Representatives of the proprietary schools, however, said it was not the schools' fault that students were not repaying their loans. Many times, students who go to trade schools drop out because of family or economic problems and are not able to repay their loans, said James P. Murphy, executive director of the National Association of Accredited Cosmetology Schools. Other students come from low-income families that are not used to borrowing money and do not understand that they have to repay, he said.

The study found that about 28 per cent of the guaranteed loans made to students in the District of Columbia were in default—a larger proportion than in any of the states. Arizona and California had the next highest proportions of student loans in default, with 26 per cent and 18 per cent, respectively.

Legislatures' Role Cited

Under the Guaranteed Student Loan program, the government insures loans that banks make. If a bank is unable to collect after a student leaves college, the state loan agency is expected to persuade the student to repay.

Jean S. Frohlicher, staff director of the National Council of Higher Education Loan Programs, said many factors influence a state's loan-default rate. In some states, she said, legislatures have restricted the tools that state loan agencies can use to collect defaulted loans. Other state loan agencies simply have not been in business long enough to perfect their collection techniques.

The study is aimed at helping state and federal policymakers make decisions on student-aid programs.

James R. Mingle, executive director of the State Higher Education Executive Officers, said members of his group simply wanted to know what the default rate is in their states and how it compares to others.

The study has already prompted a reaction from some members of Congress. Said Sen. Claiborne Pell, the Rhode Island Democrat who heads the Senate education subcommittee: "I am very concerned by the results of the study conducted for the National Governors Association. It indicates clearly that more needs to be done to crack down on defaults and particularly to focus on the institutions where defaults are highest."

Senator Pell has added a provision to a bill now being considered by a House-Senate conference committee that would allow state agencies to refuse to guarantee loans to higher-education institutions with default rates of more than 25 per cent. Now, agencies cannot refuse to guarantee loans to an institutions' students just because many of its ex-students have defaulted.

The report is available for $25 from Federal Funds Information for States, 400 North Capitol Street, N.W., Washington 20001.

—ROBIN WILSON

State-by-State Comparison of Guaranteed Student Loan Default Rates

	Total amount owed*	Amount in default	Percentage in default
Alabama	$158,558,000	$19,264,000	12.2%
Alaska	20,518,000	700,000	3.4
Arizona	229,973,000	60,807,000	26.4
Arkansas	152,133,000	9,179,000	6.0
California	2,472,520,000	454,304,000	18.4
Colorado	387,802,000	33,227,000	8.6
Connecticut	1,333,561,000	137,662,000	10.3
Delaware	109,455,000	6,055,000	5.5
District of Columbia	81,605,000	22,604,000	27.7
Florida	771,537,000	106,442,000	13.8
Georgia	427,573,000	44,692,000	10.5
Hawaii	53,657,000	6,985,000	13.0
Idaho	81,081,000	12,162,000	15.0
Illinois	1,891,517,000	275,591,000	14.6
Indiana	580,615,000	28,461,000	4.9
Iowa	515,675,000	38,573,000	7.5
Kansas	253,302,000	37,601,000	14.8
Kentucky	308,807,000	28,414,000	9.2
Louisiana	355,750,000	48,647,000	13.7
Maine	258,833,000	21,950,000	8.5
Maryland	610,717,000	77,845,000	12.8
Massachusetts	1,780,099,000	174,416,000	9.8
Michigan	1,257,185,000	158,231,000	12.6
Minnesota	654,287,000	62,380,000	9.5
Mississippi	87,790,000	11,666,000	13.3
Missouri	535,341,000	70,906,000	13.3
Montana	81,512,000	6,210,000	7.6
Nebraska	193,277,000	24,744,000	12.8
Nevada	73,787,000	10,735,000	14.6
New Hampshire	154,989,000	12,354,000	8.0
New Jersey	2,040,454,000	266,193,000	13.1
New Mexico	98,563,000	8,294,000	8.4
New York	6,771,173,000	930,301,000	13.7
North Carolina	271,992,000	20,975,000	7.7
North Dakota	65,445,000	5,736,000	8.8
Ohio	1,594,897,000	66,281,000	4.2
Oklahoma	234,222,000	34,245,000	14.6
Oregon	344,936,000	27,108,000	7.9
Pennsylvania	3,604,972,000	481,093,000	13.4
Puerto Rico	68,399,000	3,724,000	5.4
Rhode Island	254,981,000	23,596,000	9.3
South Carolina	79,609,000	5,168,000	6.5
South Dakota	211,785,000	12,726,000	6.0
Tennessee	438,437,000	31,805,000	7.3
Texas	690,754,000	71,804,000	10.4
Utah	200,031,000	19,924,000	10.0
Vermont	131,279,000	7,995,000	6.1
Virginia	738,285,000	57,684,000	7.8
Washington	323,226,000	36,692,000	11.4
West Virginia	114,949,000	18,701,000	16.3
Wisconsin	1,161,634,000	143,694,000	12.4
Wyoming	23,472,000	1,681,000	7.2
Territories	2,717,000	736,000	27.1
Total	$35,353,928,000	$4,278,963,000	12.1%

* Total amount owed represents all loan money ex-students are required to repay.

SOURCE: FEDERAL FUNDS INFORMATION FOR STATES

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New Programs Fuel Growth of Journalism-School Enrollment

Continued from Preceding Page

newer communications aspects," says Gerold M. Sass, vice-president for education at the Gannett Foundation in Rochester, N.Y. "Within the J-school, the news-editorial sequence has lost some of that glamour and luster."

Not everyone is happy about the changing nature of journalism education. "I'm troubled by it," says David Weaver, president of the Association for Education in Journalism and Mass Communication, formerly the Association for Education in Journalism. "I would frankly rather see advertising and public relations taught in business schools."

At the University of California at Berkeley's graduate journalism program, Dean Ben H. Bagdikian has strongly opposed introducing advertising and public relations courses.

"Not only do we not teach P.R. and advertising, but we believe they have no place in a journalism school," he says. "We think that journalism is more than technique. It should be governed by an inflexible principle presenting the truth about any subject in so far as that is possible."

He adds: "Now, I think the best practitioner of public relations and advertising would prefer to do that. But the overwhelming practical imperative is that they must conform to the wishes of their client and employer."

Job Market Cited

Deans and professors say students are more attracted to the newer sequences because there appear to be more jobs available in those fields and because they perceive salaries in advertising, public relations, television, and telecommunications to be greater than those in print journalism. (In fact, according to a survey conducted by the Dow Jones Newspaper Fund, in their first jobs, the 1986 graduates of news-editorial and advertising programs earned roughly the same starting salaries, while public-relations graduates earned slightly more and broadcast graduates earned less.)

"This has been coming a long time," says Richard R. Cole, dean of the School of Journalism at the University of North Carolina at Chapel Hill.

"The reason is the job market," he says. "There aren't as many daily newspapers as there used to be, and there aren't as many weekly newspapers. The number of journalism jobs has held fairly constant, but the number of jobs in P.R. and in advertising has grown greatly."

New Opportunities Created

Communications education has also been revolutionized by recent developments in telecommunications and cable television, which have created a wide range of new job opportunities.

Last year, advertising and public-relations students accounted for some 44 per cent of the students in the nation's journalism and mass-communications programs, up from 37 per cent two years ago, according to an annual study conducted by Paul V. Peterson, a professor at the Ohio State University's School of Journalism.

In 1975 and 1976, advertising accounted for 15.4 per cent of all bachelor's degrees awarded, while only 9.0 per cent of students graduated from public-relations sequences.

Most of the students in the growing advertising and public-relations programs have been women. While they have long made up the majority of communications students—some 60 per cent in 1986, according to the figures compiled by Ohio State's Mr. Peterson—there are even more women enrolled in advertising and public-relations programs.

Last year, 63 per cent of advertising majors and 71 per cent of those in public-relations programs were women, while slightly less than 60 per cent of the students in the journalism, radio, and television programs were women, according to Mr. Peterson's figures.

U. OF CALIFORNIA AT BERKELEY

Ben H. Bagdikian: "Not only do we not teach P.R. and advertising, but we believe they have no place in a journalism school."

"Females are looking at public relations and advertising because those fields are open to them, while the newsrooms are closed," Mr. Peterson says. "Newsrooms are pretty much male-dominated."

He adds: "The young lady 40 years ago who graduated from high school who was a good word merchant really had no place to go if she was interested in mass communications. Now the opportunities are all there, and they are in the advertising and P.R. area."

Almost every communications department in the country has been changing to meet the demand for the new programs.

- At Michigan State University, home to the nation's largest journalism program, Dean Erwin P. Bettinghaus says the College of Communications Arts and Sciences has been unable to find enough instructors or raise enough money to teach adequately the influx of students interested in advertising and public relations.
- The journalism school at the University of North Carolina at Chapel Hill, where roughly half of the students study advertising, recently established its first endowed advertising professorship and opened a center devoted to the study of advertising.

In 1971, one professor taught advertising at Chapel Hill. Today, says Mr. Cole, the dean, there are six.

- At Northwestern University, the Medill School of Journalism last year accepted its first students into new programs in corporate public relations, direct marketing, and advertising management.

"You have to tailor your programs to the marketplace," says Medill's dean, Edward Bassett.

The shift in emphasis away from the basic news-editorial and broadcast-news sequences comes at a time when journalism and communications education is under criticism from media professionals.

Critics have variously charged that the J-schools are not paying enough attention to nuts-and-bolts writing and editing and that they are skimping on the liberal-arts education that is needed to help students understand what they are writing about.

In the Pacific Northwest, the region's journalism schools are at odds with a group that represents 55 daily newspapers in the area.

The Allied Daily Newspapers raised the hackles of local journalism educators this year when it charged that some of the schools were not teaching their students the basics of writing, editing, producing, and selling newspapers.

A bugbear to many newspaper editors in the Northwest and around the country is the burgeoning field of "communications theory," which investigates the media and other communications fields in the broader context of society.

"I've long thought communications theory was a discipline borrowed from pop psychology," says Claude Sitton, editor of the *News & Observer* in Raleigh, N.C. "I'm a long way from being convinced it is a true academic discipline."

Concern over Specialization

Mr. Sitton, a former chairman of the American Society of Newspaper Editors' education committee, argues that the advent of communications theory and new specializations in public relations and other fields have watered down journalism-school education.

Students, he says, receive too much specialized education, to the detriment of liberal arts, although he believes some journalism schools are now making an effort to re-emphasize the liberal arts.

For example, he says, public-relations professionals "not only want their graduates well-schooled in the craft of journalism but also in public speaking. And then they want them schooled in marketing. All these courses leave no room for the liberal arts."

As a result, he says, "You get communicators with nothing to communicate."

Mr. Sitton, who represents the newspaper editors on the journalism and mass communications accrediting committee, says: "If I'm forced to choose between two applicants, one of whom has an excellent background in the liberal arts and some ability to write, and another person who has a journalism degree and a restricted background in the liberal arts, I'll take the non-journalism student." But, he adds, "I don't think I, as an employer, should be forced to make that choice."

'A Media Society'

Supporters of the new journalism education argue that it is naïve to suggest newspaper and editorial writing are pure crafts and can be taught without an understanding of the complexities of the so-called media age.

"This is so much a media society, with connections between broadcasting and print and cable and direct mail, that a school would be foolhardy not to take a comprehensive look at all of this," says Everette E. Dennis, director of the Gannett Center for Media Studies at Columbia University. "Especially with the economic realities of the media, it's inappropriate to think of news-editorial journalism without thinking of the marketing and the marketing segmentation aspects."

"Newspapers are coming into the modern world, for heaven's sake," says Mr. Bassett of Northwestern's Medill School, which has forged closer ties with the university's Kellogg School of Management. "There's no point in saying we're going to be an editorial school. Editorial is impinged upon by all other aspects of media."

Skeptics say privately that some of the new enthusiasm for business-oriented communications education has been prompted by the desire, especially at large state universities, to boost enrollment, and hence appropriations, for their programs.

With interest in print journalism leveling off and with newspapers around the country facing some hard times, some educators say the money isn't there anymore for a pure journalism program catering to a small group of students.

"In order to survive in many university situations, you have to be big," says George W. Ridge, head of the journalism department at the University of Arizona in Tucson. "Numbers are everything, and the big numbers are in public relations and radio-TV," he adds. "But if you want to run a quality program, there's no way you can maintain those numbers."

For all the changes, a small coterie of journalism programs has resisted the trend toward newfangled communications programs.

The University of Arizona, for instance, is banking on the conviction that its straight news-editorial focus, with a heavy emphasis on basic writing and editing skills, will adequately prepare students for careers in communications outside of print or television journalism.

"We have to convince students our courses can lead to a public-relations career," says Mr. Ridge. "You just have to kind of hold the line and say, Our curriculum is good and it will get you where you want to go."

"To say someone is a major in communications is meaningless," Mr. Ridge says. "It's a fraud on the students. Our students are graduates of a journalism department where it has a focus, and people understand what the focus is."

Educational Attainment and Monthly Income

Highest degree earned	All		Men		Women		White		Black	
	Percentage of adults	Monthly income	Percentage of adults	Monthly income	Percentage of adults	Monthly income	Percentage of adults	Monthly income	Percentage of adults	Monthly income
Doctorate	0.5%	$3,265	0.7%	$3,667	0.2%	—	0.5%	$3,342	0.2%	—
Professional	1.0	3,871	1.8	4,309	0.3	1,864	1.1	3,927	0.3	—
Master's	3.4	2,288	3.8	2,843	3.0	1,645	3.6	2,287	1.5	1,966
Bachelor's	10.6	1,841	11.9	2,455	9.5	1,148	11.1	1,881	5.2	1,388
Associate	3.4	1,346	3.5	1,755	3.3	959	3.5	1,367	2.6	1,158
Vocational	1.8	1,219	1.3	1,822	2.3	923	1.9	1,248	1.4	860
Some college, no degree	17.8	1,169	19.1	1,534	16.6	789	17.8	1,213	17.5	862
High-school diploma	35.5	1,045	32.7	1,510	38.0	684	36.1	1,080	32.7	765
No high-school diploma	26.0	693	25.3	973	26.7	453	24.4	734	38.6	513
Average monthly income	100.0%	$1,155	100.0%	$1,620	100.0%	$ 734	100.0%	$1,208	100.0%	$ 754
Population total	170,232,000		80,834,000		89,398,000		147,147,000		18,475,000	

AVERAGE MONTHLY INCOME BY FIELD OF DEGREE

	Bachelor's degree	Advanced degree		Bachelor's degree	Advanced degree
Agriculture, forestry	$1,945	—	Liberal arts, humanities	$1,400	$1,720
Biology	1,559	—	Mathematics, statistics	2,116	—
Business, management	2,381	3,564	Medicine, dentistry	—	4,234
Economics	2,846	—	Nursing, pharmacy, health technologies	1,424	1,804
Education	1,290	2,062	Physical science, earth science	2,529	2,913
Engineering	2,833	3,308	Psychology	1,251	2,282
English, journalism	1,477	1,945	Religion, theology	—	1,584
Home economics	1,065	—	Social studies	1,610	2,124
Law	—	4,060	**All fields**	**$1,841**	**$2,711**

Note: The figures are based on a survey of 19,000 households conducted in the spring of 1984 as part of the Census Bureau's Survey of Income and Program Participation. They cover the civilian, resident U.S. population of adults age 18 and older. A dash indicates insufficient data.

SOURCE: U.S. CENSUS BUREAU

10/20/87C2175-1

THE CHRONICLE
of Higher Education.

ISSN 0009-5982

October 21, 1987 • $1.95
Volume XXXIV, Number 8

News Summary

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Archaeologists are using artifacts and computers to try to understand the thinking of prehistoric people: Page A6.

A professor at the University of Massachusetts moonlights as an idea man and political guru for the Democratic Party: Page A15.

Acrimony among Southern Baptists touched higher education as two institutions vowed to fight a "fundamentalist takeover": Page A15.

Some appointees to a committee studying student aid are said to be too unfamiliar with the programs to make recommendations: Page A21.

Maryland politicians and higher-education officials are at odds over governance of the state's public colleges and universities: Page A21.

The United Negro College Fund faces questions about the quality of its members and and how well it represents their interests: Page A33.

A leader of organized philanthropy urges colleges to instill a "charitable impulse" in students to involve them in social causes: Page A33.

At the few colleges in North America where it is played, cricket evokes another time and culture: Page A41.

Australia's two-tier system of financing colleges of advanced education and universities appears to be dead: Page A45.

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SUPPORT FROM CAMPUS ACTIVISTS

College Students Play a Visible and Substantial Role in Jackson's 'Rainbow Coalition' Presidential Drive

HUNTER COLLEGE

PHOTOGRAPH FOR THE CHRONICLE BY WILL OWENS

With banners on balcony, students make their presence felt at the Raleigh, N.C., convention center as the Rev. Jesse L. Jackson announces his candidacy for President.

By SCOTT JASCHIK

RALEIGH, N. C.

When the National Rainbow Coalition gathered here this month to hear the Rev. Jesse L. Jackson formally announce his candidacy for President, hundreds of students from across the country came, too.

But they didn't travel thousands of miles just to listen to speeches. They came to hold a concurrent meeting to consider their place in "the rainbow" and to plan a role in Mr. Jackson's campaign—a role its organizers and the students themselves say will be crucial to the campaign's success.

To date, Mr. Jackson, more than any other candidate in either party, has actively sought and cultivated student support, and he appears to have the strongest and most organized backing on many campuses. Most observers say the candidate who comes closest to Mr. Jackson in that regard is Rep. Jack F. Kemp, Republican of New York.

Jackson campaign workers like to say that their organization is the strongest because they have the best candidate for students. But they acknowledge that another reason for their early organizational strength is that their base comprises groups that already have experi-

Continued on Page A38

California Judge Hears Arguments in Challenge to NCAA Drug-Test Program

By DOUGLAS LEDERMAN

Opponents and backers of the National Collegiate Athletic Association's mandatory drug-testing policy testified in court for the first time last week, just a month before the association is scheduled to test hundreds of athletes in its fall championships.

Witnesses from both camps offered their views to a California Superior Court judge in a lawsuit brought by two Stanford University athletes who are challenging the year-old program.

A decision in favor of the athletes could hinder the association's testing program, drug-testing experts say.

Under the N.C.A.A.'s rules, athletes at all member institutions must sign a form at the beginning of the academic year in which they consent to urinalysis for all post-season competition. Any athlete who refuses to comply is ineligible to compete in N.C.A.A.-sanctioned competition.

In addition to the California case, lawsuits have been filed challenging the tests by athletes in Washington State, Colorado, and Massachusetts. None have yet to come to trial.

"When we went into this program, we knew it was controversial, we knew we were living in a time when litigation was the norm, and we prepared ourselves to meet this challenge, fully expecting these kinds of problems," John L. Toner, a former N.C.A.A. president and the chairman of the association's drug-testing committee, said of the lawsuits.

"I believed, and continue to believe, that the program is fully defensible, and that the N.C.A.A. has a good basis, mostly because the membership decided to start the program," he added.

In last week's case, in Santa Clara County Superior Court, Judge Conrad L. Rush-

Continued on Page A43

Computer Musicians Play a New Tune on Campus

Computers are being used by many college music departments to create new sounds and offer new methods of instruction, but not all music educators are enthusiastic about the new technology. Story on Page A14.

MARGINALIA

This week, a few matters of course:

■

A list of courses in women's studies at Duke University contains this offering: "Writings in the Rural Tradition"—to which is appended the following footnote:

"Focuses on non-human primates, with an emphasis on gender differences of research subjects and researchers."

All about monkey business, down on the farm?

■

And a listing of the non-credit management programs at the Hartford Graduate Center contains this statement:

"The Management Development Program focuses on the critical elements of management. The implications of change in the eternal environment are examined for their impact on productivity and profitability. . . ."

Heavens!

■

And a syllabus for a course in "Advanced Media Writing" at Williamsport (Pa.) Area Community College says:

"Budget impact: None. Realignment of requirements for program makes current instructor available for the curse without increase in teaching load. . . ."

Anything to save money.

■

And the listing of a program called "Burnout and Stress Management" at last year's conference of the National Academic Advising Association carried this note:

"This program is based on the assumption that academic advisors have the potential to develop adaptive skills that can facilitate self-enhancing levels of stress."

It's a potential they won't want to realize.

■

And this seminar listing appeared in the Reed College newsletter, *Newsprint:*

"Physics Seminar: 4:10 p.m.–P123. Aaron B. Corbet, adjunct professor of chemistry, Portland State University, presents 'Chaos.' Refreshments will be served."

Thank goodness.

■

And the Smithsonian Institution sent out the following announcement of an event at the University of Montana:

"Wednesday, October 14—Winged Wonders: The Story of the Flying Wings . . . Shaped like a giant boomerang, the flying wing was an airplane stripped of all essentials. . . ."

It'll never get off the ground.

—C.G.

In Brief

Suspended Student Sues U. of Mass. for $500,000

One of the six white students who were suspended after a racial brawl at the University of Massachusetts at Amherst last year has sued the institution, claiming the suspension violated his civil rights.

Christopher S. Johnson, Jr., filed a lawsuit in U.S. District Court in Springfield, asking for $500,000 in damages and reinstatement at the university. The lawsuit claimed Mr. Johnson had been discriminated against because he is white. He said he had not acted "in any way different from the thousand-odd students at the scene of the alleged confrontation."

The brawl, in which several black students were injured, took place following the final game of last year's World Series.

2 Students Disciplined in Harvard Racial Case

One Harvard University football player has been suspended for a year and a second placed on disciplinary probation for their part in an incident involving a black student last January.

Four other students were suspended earlier for breaking a window near a desk where the black student was working.

After witnessing the incident, one player, Jack C. Patterson returned to his room, called the black student, and said: "Negro hit squad strikes again." Mr. Patterson's roommate, Gregory H. Williams, then called the same student and said, "How's the draft in there, man?"

The 25-member Administrative Board, the university's principal disciplinary panel, suspended Mr. Patterson and placed Mr. Williams on probation. However, the board decided to allow Mr. Williams to continue to play football while on probation, an action that was protested by some at Harvard.

In a letter published in the student newspaper, the *Crimson*, two members of Harvard's Black Students Association criticized the board's decision. "The message to black students," they said, "is that their safety is of lesser importance than the politics of football."

30 Arrested at U. of Iowa in CIA-Recruiting Protest

Thirty protesters at the University of Iowa were arrested after they refused to leave a building where recruiters from the Central Intelligence Agency were meeting with students.

The demonstrators, most of whom were students, accused the C.I.A. of conducting illegal activities and said the agency had no right to try to recruit others for such purposes.

The protesters were carried out of the Westlawn Building by Iowa City police and campus security officers. They were charged on a number of counts, including criminal trespass and disorderly conduct. In addition to those charges, the students arrested were subject to campus disciplinary action, ranging from a reprimand to expulsion, a university spokesman said.

Arts Colleges Become University, First in U.S. Devoted to Subject

PHILADELPHIA

The Pennsylvania Board of Education has conferred university status on the Philadelphia Colleges of the Arts, making it the first university in the country devoted exclusively to education and professional training in the visual and performing arts.

The university resulted from the consolidation in 1985 of the Philadelphia College of Art and the Philadelphia College of Performing Arts.

Peter Solmssen, president of the institution, said its new status as a university "gives recognition to the growing interrelationship between the visual and performing arts, and the need for artists to be broadly educated as well as professionally trained."

The University of the Arts offers training in some 150 professional career paths. More than 2,000 students are enrolled in its undergraduate, graduate, and extension programs.

U. of Mississippi Student Dies in Fraternity Mishap

The University of Mississippi is investigating the accidental death of a freshman who sustained fatal head injuries at a fraternity-house party.

Harry Cline died from his injuries two days after he fell down a flight of stairs at the party. University officials said an unnamed witness maintained that Mr. Cline had been drinking alcohol before his accident at the Kappa Alpha house, although fraternity members insisted that no alcohol had been consumed at the party. Alcohol is banned at the university.

The fraternity had not received prior approval from the university for the "big brother–little brother" party.

Faculty Union Leader Claims Unfair Dismissal

A faculty member at ITT Technical Institute at Minneapolis has filed an unfair-labor-practice charge against the institution, claiming he was fired because of his union activities.

Greg Weiler was dismissed September 18, three days after he was elected to head the local faculty union, according to his grievance filed with the National Labor Relations Board. Mr. Weiler helped form the new union last month.

ITT officials said he was one of three faculty members who had been laid off because of declining enrollment in their divisions. They denied the dismissal had anything to do with his activities in the union, which is a chapter of the Minnesota Federation of Teachers (A.F.L-C.I.O.).

Mr. Weiler was fired two days after a job evaluation, which he

DIVESTMENT WATCH

Rochester to Sell Stock in Firms with South Africa Ties

Reversing a recently disclosed policy, the University of Rochester has decided to sell stocks it has purchased since May in companies that have operations in South Africa. The purchases prompted student protests, among them the construction of a symbolic shantytown on the campus.

The stocks in question, valued at between $20-million and $25-million, were bought after the university ended an unsuccessful strategy of investing endowment funds in small companies with potential for growth. The new investment policy favored stocks in large corporations, some of which do business in South Africa.

A spokeswoman for the university said the decision to sell South Africa–related stocks came after the university's Committee on Ethics and Investing recommended divestment to the executive committee of the board of trustees, which adopted the recommendation as permanent university policy. Members of the ethics and investing committee include faculty members, students, alumni, and trustees, the spokeswoman said.

■

Gonzaga University's trustees have voted not to sell about $4-million in stocks in companies that do business in South Africa, provided the companies abide by the Sullivan Principles, a code of conduct for U.S. businesses in South Africa. The code was written by the Rev. Leon Sullivan in 1977, but in June he said it had not been effective and called on companies to end their operations in South Africa by March 1988.

The trustees' decision endorsed a recommendation by the university's president, the Rev. Bernard J. Coughlin. In a statement explaining his recommendation, Father Coughlin cited the "likelihood" that there would be "some financial loss to the university," as well as the possibility that the university could be sued by donors who believed it had not invested their money "so as to assure the highest rate of return."

He added that questions remained about the legality of using money given for scholarships and endowed professorships "in order to achieve certain political goals not at all contemplated in the giving of those gifts."

■

Queen's University's trustees have voted to sell the institution's remaining holdings in corporations that do business in South Africa. The investments represent close to 14 per cent of the endowment of $120-million (Canadian).

The university, in Kingston, Ontario, had come under increasing pressure in recent years to sell off its South Africa–related investments. In 1986, its trustees adopted a policy of "conditional divestment." The faculty senate then passed a resolution urging the board to alter its policy, and protesters stormed two board meetings, forcing adjournment of the sessions when the trustees refused to reopen the divestment debate.

The decision to sell the stocks came after David Smith, principal of the university, reversed his earlier position and voted for total divestment, citing faculty and student support for such a policy.

■

The University of North Carolina at Charlotte will divest itself of its endowment portfolio of stocks in companies linked to South Africa, the institution's trustees have decided.

The trustees' vote, which followed a recommendation from the university's faculty council, affects stocks worth about $50,000. The university's endowment has a value of about $1.5-million, a spokesman said.

The spokesman also said a university-related foundation with assets of $10.5-million was likely to follow the trustees' lead. Neither the university nor the foundation has been investing lately in companies that do business in South Africa, he added.

The Chronicle of Higher Education (ISSN 0009-5982) is published weekly except the last two weeks in August and the last two weeks in December, at 1255 Twenty-Third Street, N.W., Washington, D.C. 20037. Subscription rate: $50 per year ($51 if bill is to be sent). Second-class postage paid at Washington, D.C., and at additional mailing offices. Copyright © 1987 by The Chronicle of Higher Education, Inc. Printed in the United States of America. POSTMASTER: Send address changes to The Chronicle of Higher Education, P.O. Box 1955, Marion, Ohio 43305. Member, Audit Bureau of Circulations. The Chronicle reserves the right not to accept an advertiser's order. Only publication of an advertisement shall constitute final acceptance of the advertiser's order.

Higher-Education Aid for Fiscal 1988 Approved by House and Senate

	Fiscal 1987 estimated spending	Fiscal 1988 President's request	Approved by House	Approved by Senate
Student assistance				
Pell Grants	$3,862,000,000	$2,710,000,000	$4,450,000,000	$4,500,000,000
Supplemental Grants	412,500,000	0	425,000,000	428,175,000
College Work-Study	592,500,000	0	625,000,000	614,423,000
Income-contingent loans	5,000,000	600,000,000	0	4,500,000
State Student Incentive Grants	76,000,000	0	80,000,000	76,000,000
Perkins Loans	210,000,000	26,000,000	226,000,000	214,000,000
Guaranteed Student Loans	2,717,000,000	1,176,574,000	2,425,000,000	2,935,600,000
Paul Douglas Teacher Scholarships	15,500,000	0	15,500,000	15,500,000
Graduate support				
Patricia Roberts Harris graduate fellowships	11,750,000	0	15,000,000	16,970,000
Jacob K. Javits fellowships	4,700,000	0	7,000,000	5,200,000
Patricia Roberts Harris public-service fellowships	2,500,000	0	3,000,000	3,728,000
Graduate Assistance in Areas of National Need	—	0	12,000,000	2,000,000
Graduate education for minorities	—	0	5,000,000	0
Institutional assistance				
Cooperative education	14,400,000	0	14,400,000	14,400,000
Developing institutions	147,208,000	50,741,000	180,000,000	138,300,000
Facilities				
Construction grants	0	0	7,000,000	0
Loans and insurance	19,205,000	0	—	—
College housing and academic facilities loans and construction insurance	—	—	90,000,000	40,000,000
Interest subsidies	23,000,000	22,500,000	22,500,000	22,500,000
College Construction Loan Insurance Association	—	0	20,000,000	20,000,000
International education	32,050,000	0	32,050,000	32,050,000
Law School Clinical Experience	1,500,000	0	5,000,000	1,500,000
Veterans' Education Outreach	3,000,000	0	3,000,000	3,000,000
Library resources				
Research libraries	6,000,000	0	6,000,000	6,000,000
Training and demonstration	1,000,000	0	1,000,000	500,000
Aid to disadvantaged				
College-aid migrant programs	$ 1,200,000	$ 0	$ 1,400,000	$ 1,400,000
Legal Training for the Disadvantaged	1,500,000	0	2,000,000	1,500,000
Minority Institutions Science Improvement	5,000,000	5,000,000	5,500,000	5,500,000
Programs for disadvantaged students	176,370,000	82,370,000	215,000,000	210,000,000
Education for the handicapped				
National Institute on Disability and Rehabilitation Research	48,500,000	48,500,000	52,000,000	50,200,000
Research and development	18,000,000	18,000,000	19,000,000	18,000,000
Personnel development	67,730,000	50,000,000	71,000,000	67,730,000
Rehabilitation training	29,550,000	25,838,000	30,000,000	30,000,000
Postsecondary programs	5,900,000	5,900,000	6,200,000	6,100,000
Education research and statistics				
Office of Educational Research and Statistics				
Office of Research	20,100,000	21,500,000	21,826,000	n/a
Center for Statistics	14,100,000	21,600,000	14,486,000	n/a
Programs for the Improvement of Practice	22,100,000	19,600,000	22,057,000	n/a
Information Services	7,200,000	7,500,000	7,532,000	n/a
Bilingual education				
Bilingual vocational training	3,686,000	0	3,900,000	3,900,000
Training grants	33,564,000	33,564,000	37,023,750	37,023,750
Miscellaneous				
Adult education	112,881,000	130,000,000	130,000,000	130,000,000
Fund for the Improvement of Postsecondary Education	12,163,000	7,500,000	12,163,000	12,163,000
Community-service projects	1,537,000	0	1,537,000	1,537,000
Office for Civil Rights	43,000,000	42,975,000	42,333,000	42,333,000
Teacher training	95,177,000	80,000,000	96,000,000	154,000,000
Vocational education	874,819,000	0	899,600,000	942,450,000
Women's educational equity	3,500,000	0	3,500,000	3,500,000
School, College and University partnerships	—	0	5,000,000	0

Spending Hikes that Senate Voted for Education and Science Threatened by Mandatory Cuts

WASHINGTON

Spending at the Education Department would rise by 9 per cent to $21.2-billion for the current fiscal year, under a bill that the Senate approved last week by a vote of 80 to 15.

Another measure that was passed by the Senate last week would provide $1.86-billion to the National Science Foundation for the current fiscal year, 16 per cent more than Congress provided to the agency in fiscal 1987.

However, increases for higher education and research approved by both the House and Senate could be in serious jeopardy. The Congressional Budget Office last week released its projections of across-the-board spending cuts that could be required under the new version of the Gramm-Rudman-Hollings deficit-reduction law, and their estimates spelled trouble for higher education.

Could Be Cut 8.7 Pct.

Most domestic programs—including virtually all higher-education programs—will be sliced by 8.7 per cent unless Congress and the President can work out another way to cut $23-billion from the federal budget by November 20.

Although many in Congress have been hoping that the threat of across-the-board spending cuts would force the President to compromise with lawmakers, Capitol Hill observers are becoming increasingly skeptical about the prospects for an agreement, which could mean that higher education and other domestic programs would face deep cuts. The Education Department for instance, would have $1.4-billion cut from its present budget, the C.B.O. estimated.

Here are the details of the appropriations measures passed last week:

Education Department. Under the Senate bill, enough money would be provided to increase the amount of money for Pell Grants—which go to poor students—by 17 per cent, to $4.5-billion. Money for other student-loan and grant programs would rise by smaller amounts.

the maximum Pell Grant would continue to be $2,100 per student.

A bill approved in August by the House would allow the maximum grant to rise to $2,300. The House bill would allow about $20.6-billion to be spent on Education Department programs in fiscal 1988, which began October 1.

The Senate bill would increase money for higher-education programs, including several that encourage disadvantaged high-school students to attend college and help institutions build academic facilities.

Money to help black colleges and other institutions improve their administrative and financial systems, however, would be slightly decreased.

The Senate also approved $4.5-million for Income Contingent Loans. The program was established last year as a demonstration project at 10 colleges; it bases loan repayment on a student's income after college.

National Institutes of Health. The Senate approved $6.9-billion for the National Institutes of Health, a 15.5-per-cent increase over last year's budget and $292-million more than the House had suggested that the N.I.H. be given.

For research, prevention, and education efforts related to AIDS, or acquired immune deficiency syndrome, the Senate recommended that $966-million be spent throughout the Department of Health and Human Services.

The total spending recommended for AIDS by the Senate was $21-million more than had been recommended by the House. The bill would earmark $20-million for renovation and expansion of laboratory facilities that are used to conduct research on the disease.

National Science Foundation. Under the Senate's measure, the foundation's research programs would receive $1.63-billion, while science-education programs would get $115-million. Both amounts are what the Reagan Administration requested.

A spending measure passed by the House would provide $1.5-billion for research and $145-million for science education.

The Senate's approval of a generous increase for the science foundation keeps alive President Reagan's plan to double its budget by fiscal 1991. The President has been pushing hard for a substantial increase for the foundation, saying the money is needed to improve the nation's ability to compete in world trade.

The House bill, however, would appropriate only $1.79-billion for the foundation, or 10 per cent more than the $1.62-billion it received in fiscal 1987, which ended September 30.

A conference committee composed of members of the House and Senate will now have to work out a compromise on spending for the foundation.

National Aeronautics and Space Administration. The Senate voted to provide a total of $9.2-billion, slightly less than the $9.48-billion approved by the House. Research and development for the space station would receive $559-million under the Senate's measure, compared with $767-million requested by Mr. Reagan.

In other action affecting researchers, the House Committee on Science, Space, and Technology last week approved a measure authorizing $1.08-billion through fiscal 1990 for construction of the Superconducting Supercollider.

Although some members of the science committee attempted to defeat the bill, arguing that the $4.4-billion cost of the particle accelerator would cut into the budgets of other science projects, most agreed that the project was too important to delay.

The bill also requires the Energy Department, which will select the site for the supercollider, to give three times as much weight to the technical merits of a potential site as to the cost of constructing and operating the accelerator at that site. Committee members said the provision was necessary to prevent sites on which federal science facilities have been built from gaining an unfair advantage over competitors that have no such facilities.

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Additional Tuition-and-Fee Data for 1987-88

The following table shows tuition and fees for 315 colleges and universities for the 1986-87 and 1987-88 academic years, including, for 1987-88, the additional tuition that many public institutions charge to out-of-state students. It supplements a table of costs at 2,700 colleges and universities that appeared in the August 12 issue of *The Chronicle*. It addition to listing institutions not previously reported, the table includes corrected figures for Anderson College in Indiana, Ohio Northern University, Southeastern Louisiana University, and Western Montana College.

The figures in both tables were compiled by the College Scholarship Service, the financial-aid division of the College Board.

"n/a" indicates that comparable figures for 1986-87 were not available.

	1986-87	1987-88	
	Tuition and fees	Tuition and fees	Added out-of-state tuition
ALABAMA			
Troy State U Dothan	$1,035	$1,086	$ 264
U of Alabama Birmingham	1,590	1,590	1,500
ALASKA			
U of Alaska			
Anchorage	1,048	1,036	1,560
Fairbanks	1,104	1,104	1,560
Juneau	980	994	1,560
Anchorage CC	888	888	1,320
Islands CC	744	744	1,080
Kenai Peninsula CC	756	756	1,080
Ketchikan CC	740	740	1,080
Kodiak CC	720	720	1,080
Kuskokwim CC	750	750	1,080
Matanuska-Susitna CC	732	732	1,080
Northwest CC	720	720	1,080
Prince William Sound CC	n/a	740	1,080
Tanana Valley CC	918	918	1,080
ARIZONA			
Arizona Western C	324	408	3,360
Central Arizona C	1,020	510	3,780
Cochise C	510	540	2,760
Eastern Arizona C	512	500	2,680
Gateway CC	548	615	3,540
Glendale CC	548	615	3,540
Mesa CC	548	615	3,540
Mohave CC	294	294	2,400
Navajo CC	360	360	0
Northland Pioneer C	120	120	2,156
Phoenix C	548	615	3,540
Pima CC	408	510	1,068
Rio Salado CC	548	615	3,540
Scottsdale CC	548	615	3,540
South Mountain CC	548	615	3,540
Yavapai C	500	510	3,410
ARKANSAS			
North Arkansas CC	480	528	504
U of Central Arkansas	900	1,080	1,050
CALIFORNIA			
Western St U C of Law of San Diego	7,820	7,820	0
COLORADO			
Colorado Northwestern CC	170	180	2,030
Fort Lewis C	1,088	1,836	4,506
Lamar CC	982	1,050	1,362
DELAWARE			
Delaware St C	906	1,000	1,300
Delaware St and Tech CC			
Southern	774	771	1,134
Stanton-Wilmington	699	771	1,134
Terry	699	771	1,134
FLORIDA			
Florida A & M U	958	1,079	2,489
Lake City CC	585	630	660
New C of U of South Florida	1,157	1,134	2,489
U of North Florida	1,004	1,111	2,489
GEORGIA			
Abraham Baldwin Agricultural C	969	1,029	1,578
Atlanta JC	819	819	702
Bainbridge JC	824	824	702
Brunswick JC	924	924	1,491
Dalton JC	819	819	702
Dekalb C	975	870	1,350
Emanuel County JC	834	834	1,491
Gainesville JC	852	852	1,491
Georgia Inst of Technology	1,704	1,704	3,369
Georgia St U	1,419	1,419	3,330
Gordon JC	879	879	702
Medical C of Georgia	1,566	1,566	2,760
South Georgia C	903	918	1,578
Southern C of Technology	1,212	1,212	2,082
Valdosta St C	1,305	1,305	2,082
West Georgia C	1,317	1,317	2,082
ILLINOIS			
Highland CC	600	600	1,982
John Wood CC	750	750	2,800
Joliet JC	660	710	2,609
Kishwaukee C	805	855	3,467
Lincoln Land CC	703	863	2,760
Rend Lake C	630	690	3,956
Shawnee C	690	690	2,223
INDIANA			
Anderson C	5,280	5,610	0
Ball St U	1,662	1,767	2,307
Indiana Voc-Tech C			
Columbus	1,250	1,320	1,080
Northeast	1,250	1,320	1,080
INDIANA—Continued			
Indiana Voc-Tech C			
Whitewater	$1,250	$1,320	$1,080
Vincennes U	1,270	1,377	2,347
IOWA			
Hawkeye Inst of Technology	1,005	1,005	936
Indian Hills CC	1,030	1,028	450
Iowa Central CC	1,045	1,098	500
Iowa Lakes CC	982	1,000	435
Northeast Iowa Tech Inst	950	1,050	900
Southwestern CC	1,009	1,009	472
Western Iowa Tech CC	845	845	810
LOUISIANA			
Delgado CC	770	830	1,200
Grambling St U	1,376	1,364	1,350
Louisiana St U			
A & M C	1,724	1,724	2,800
Alexandria	864	820	1,320
Eunice	830	830	1,500
Shreveport	1,200	1,200	1,680
Louisiana Tech U	1,415	1,436	945
McNeese St U	1,240	1,247	1,350
Nicholls St U	1,228	1,238	1,350
Northwestern St U of Louisiana	1,362	1,327	1,350
Phillips JC	3,100	3,100	0
Southeastern Louisiana U	1,330	1,335	1,440
Southern U Shreveport-Bossier City	700	700	1,030
U of New Orleans	1,224	1,524	2,376
U of Southwestern Louisiana	1,074	1,231	1,650
MAINE			
U of Maine			
Augusta	1,458	1,515	2,220
Farmington	1,475	1,528	2,220
Fort Kent	1,443	1,500	2,220
Machias	1,453	1,520	2,220
Orono	1,565	1,846	3,060
Presque Isle	1,463	1,540	2,220
U of Southern Maine	1,555	1,651	3,060
MARYLAND			
Essex CC	978	945	2,250
Morgan St U	1,564	1,648	1,627
MASSACHUSETTS			
Massachusetts Bay CC	914	1,008	1,692
Middlesex CC	908	914	1,692
MICHIGAN			
Central Michigan U	1,520	1,609	2,430
Delta C	1,004	1,034	1,327
Henry Ford CC	990	995	360
Michigan St U	2,100	2,546	3,724
Oakland U	1,611	1,716	2,820
U of Michigan			
Ann Arbor	2,528	2,739	6,144
Dearborn	1,894	2,098	4,364
Flint	1,536	1,700	3,744
Walsh C of Accountancy and Business Administration	2,804	3,044	0
Western Michigan U	1,556	1,618	2,431
MINNESOTA			
U of Minnesota Tech C Crookston	1,868	1,944	2,636
MISSISSIPPI			
Alcorn St U	1,550	1,550	1,182
Coahoma JC	700	700	1,400
Delta St U	1,350	1,470	1,182
Jackson St U	1,472	1,500	1,176
Jones County JC	536	536	600
Mississippi St U	1,700	1,777	1,182
Mississippi U for Women	1,475	1,580	1,182
Mississippi Valley St U	1,500	1,660	1,182
Pearl River JC	560	550	600
U of Mississippi			
Main campus	1,727	1,780	1,182
Medical Center	1,667	1,667	1,182
U of Southern Mississippi	1,600	1,675	1,182
MISSOURI			
Rutledge C	2,976	2,976	0
MONTANA			
Eastern Montana C	1,125	1,125	1,458
Montana C of Mineral Science and Technology	n/a	1,069	1,818
Montana St U	1,169	1,307	1,818
Northern Montana C	n/a	1,041	1,458
U of Montana	n/a	1,238	1,818
Western Montana C	n/a	1,167	1,458
NEBRASKA			
Mid-Plains CC	605	615	120
NEVADA			
Western Nevada CC	600	600	2,200
NEW JERSEY			
Brookdale CC	1,002	1,024	2,670
Essex County C	948	1,275	2,220
Gloucester County C	750	1,050	2,790
Middlesex County C	893	977	1,728
New Jersey Inst of Technology	2,712	2,944	2,364
Passaic County CC	936	1,146	960
Salem CC	1,039	1,094	460
NEW MEXICO			
New Mexico St U			
Main campus	1,026	1,152	3,168
Carlsbad	438	432	864
Santa Fe CC	465	520	840
Western New Mexico U	726	844	2,634
NEW YORK			
Herkimer County CC	1,170	1,260	1,150
NORTH CAROLINA			
Appalachian St U	884	923	3,500
East Carolina U	778	842	3,500
Elizabeth City St U	924	982	3,076
Fayetteville St U	914	960	3,500
Greensboro C	n/a	4,750	0
North Carolina A & T St U	938	988	3,500
North Carolina Central U	867	894	3,500
North Carolina Sch of the Arts	1,239	1,293	3,927
NORTH CAROLINA—Continued			
North Carolina St U	$ 839	$ 880	$3,602
Pembroke St U	674	706	3,076
Rutledge C of Winston-Salem	2,484	2,484	0
U of North Carolina			
Charlotte	749	779	3,500
Greensboro	922	989	3,602
Wilmington	866	911	3,500
NORTH DAKOTA			
Bismarck St C	1,138	1,188	1,332
Lake Region CC	1,138	1,228	1,332
North Dakota St C of Science	1,038	1,143	1,332
North Dakota St U			
Main campus	1,194	1,311	1,494
Bottineau	1,106	1,229	1,332
U of North Dakota			
Main campus	1,266	1,412	1,494
Williston	1,140	1,250	1,332
Valley City St C	1,128	1,224	1,332
OHIO			
Bowling Green St U Firelands C	1,546	1,696	2,638
Central Ohio Tech C	1,243	1,383	522
Clark Tech C	1,386	1,440	1,260
Cleveland St U	2,011	2,067	2,067
Dyke C	3,680	3,830	0
Kent St U			
Main campus	2,195	2,388	2,000
Ashtabula	1,791	1,938	2,000
East Liverpool	1,791	1,938	2,000
Salem	1,791	1,938	2,000
Stark County	1,791	1,938	2,000
Tuscarawas	1,791	1,938	2,000
Lakeland CC	1,139	1,222	1,532
Lima Tech C	1,119	1,200	1,206
Miami U			
Hamilton	1,948	2,126	3,324
Middletown	1,948	2,126	3,324
Oxford	2,584	2,834	3,324
Ohio Dominican C	5,250	5,520	0
Ohio Northern U	6,540	7,230	0
Ohio St U			
Main campus	1,704	1,890	3,090
Agricultural Tech Inst	1,653	1,812	3,090
Lima	1,653	1,812	3,090
Mansfield	1,653	1,812	3,090
Marion	1,653	1,812	3,090
Newark	1,653	1,812	3,090
Ohio U			
Belmont	1,668	1,827	2,310
Chillicothe	1,668	1,827	2,310
Zanesville	1,668	1,827	2,310
Sinclair CC	1,035	1,125	1,080
Southern Ohio C	3,260	4,100	0
U of Akron			
Main campus	1,784	2,338	2,456
Wayne General and Tech C	1,716	2,338	2,456
U of Toledo	1,740	1,908	2,430
Youngstown St U	1,500	1,600	1,080
OKLAHOMA			
East Central U	564	746	1,392
Northeast Oklahoma A & M C	495	573	1,125
Oklahoma St U			
Main campus	841	974	2,004
Tech Branch Okmulgee	700	767	2,004
Sayre JC	465	465	930
Southeastern Oklahoma St U	626	731	1,329
Tulsa JC	525	603	1,125
U of Oklahoma Health Sciences Center	814	1,081	2,475
OREGON			
Portland CC	675	675	2,700
Portland St U	1,476	1,545	2,784
Southern Oregon St C	1,488	1,521	2,382
Umpqua CC	799	795	2,841
U of Oregon	1,487	1,556	2,784
Western Oregon St C	1,457	1,503	2,382
PENNSYLVANIA			
Butler County CC	1,074	1,122	2,502
CC of Beaver County	1,130	1,190	2,820
CC of Philadelphia	1,294	1,504	2,940
Delaware County CC	894	966	1,872
Hahnemann U	5,286	5,730	0
Northampton Cty Area CC	1,290	1,380	2,940
Pennsylvania St U			
Main campus	2,996	3,292	3,318
Allentown	n/a	3,126	3,484
Altoona	n/a	3,126	3,484
Beaver	n/a	3,126	3,484
Behrend	n/a	3,292	3,318
Berks	n/a	3,126	3,484
Delaware	n/a	3,126	3,484
Du Bois	n/a	3,126	3,484
Fayette	n/a	3,126	3,484
Harrisburg	n/a	3,292	3,318
Hazleton	n/a	3,126	3,484
McKeesport	n/a	3,126	3,484
Mont Alto	n/a	3,126	3,484
New Kensington	n/a	3,126	3,484
Ogontz	n/a	3,126	3,484
Schuylkill	n/a	3,126	3,484
Shenango	n/a	3,126	3,484
Wilkes-Barre	n/a	3,126	3,484
Worthington-Scranton	n/a	3,126	3,484
York	n/a	3,126	3,484
St Sys of Higher Education			
Bloomsburg U of Pa	1,824	1,990	1,436
California U of Pa	1,970	2,120	1,436
Cheyney U of Pa	1,880	2,095	1,396
Clarion U of Pa	1,882	2,038	1,436
East Stroudsburg U of Pa	1,870	2,034	1,436
Edinboro U of Pa	1,950	2,120	1,436
Indiana U of Pa	1,904	2,054	1,436
Kutztown U of Pa	1,848	2,022	1,436
Lock Haven U of Pa	1,845	1,995	1,436
Mansfield U of Pa	1,905	2,055	1,436
Millersville U of Pa	1,806	2,040	1,436
Shippensburg U of Pa	1,916	2,066	1,436
Slippery Rock U of Pa	1,922	2,132	1,436
West Chester U of Pa	1,990	1,985	1,436
U of Pittsburgh Titusville	3,110	3,365	3,200
Williamsport Area CC	1,563	1,575	3,593
SOUTH CAROLINA			
Francis Marion C	1,100	1,340	1,340
Piedmont Tech C	698	705	393
Rutledge C Columbia	3,105	3,105	0
South Carolina St C	1,200	1,450	1,530
SOUTH CAROLINA—Continued			
U of South Carolina			
Aiken	$1,400	$1,400	$1,540
Beaufort	1,200	1,200	1,370
Coastal Carolina C	1,400	1,400	1,540
Columbia	2,028	2,230	2,332
Lancaster	1,200	1,200	1,370
Salkehatchie	1,200	1,200	1,370
Spartanburg	1,400	1,400	1,540
Sumter	1,200	1,200	1,370
Union	1,200	1,200	1,370
TENNESSEE			
Draughon's JC Knoxville	3,168	3,375	0
TEXAS			
Brookhaven C	304	304	1,490
Cedar Valley C	304	304	1,490
Eastfield C	300	304	1,490
El Centro C	304	304	1,490
Frank Phillips C	370	370	120
Hill C	n/a	525	520
Mountain View C	304	304	1,490
North Lake C	304	304	1,490
Richland C	304	304	1,490
Texarkana C	396	396	400
UTAH			
Dixie C	809	990	1,702
Utah St U	1,185	1,293	2,256
Utah Tech C at Salt Lake	975	1,077	1,920
VERMONT			
New England Culinary Inst	9,185	10,070	0
U of Vermont	3,208	3,440	5,868
VIRGINIA			
Dabney S Lancaster CC	776	774	2,973
Danville CC	765	763	2,973
Mountain Empire CC	765	763	2,973
Norfolk St U	1,308	1,370	1,220
Old Dominion U	1,986	2,222	1,848
Patrick Henry CC	771	769	2,973
Rappahannock CC	774	774	2,973
Southwest Virginia CC	769	768	2,973
Virginia Commonwealth U	2,110	2,230	3,000
WEST VIRGINIA			
Bluefield St C	890	920	1,510
WISCONSIN			
U Wisconsin			
Eau Claire	1,447	1,578	2,881
Green Bay	1,401	1,521	2,881
La Crosse	1,448	1,575	2,881
Madison	1,570	1,737	3,451
Milwaukee	1,625	1,784	3,451
Oshkosh	1,392	1,512	2,881
Parkside	1,386	1,506	2,881
Platteville	1,462	1,586	2,881
River Falls	1,436	1,568	2,881
Stevens Point	1,475	1,599	2,881
Stout	1,461	1,594	2,881
Superior	1,395	1,516	2,881
Whitewater	1,450	1,570	2,881
AMERICAN SAMOA			
American Samoa CC	78	78	144

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THE CHRONICLE
of Higher Education.

ISSN 0009-5982

October 28, 1987 • $1.95
Volume XXXIV, Number 9

News Summary

Articles on inside pages

Scholars are studying the culture of black Americans from an African perspective, rejecting what they call academe's Western slant: Page A6.

Robert M. Solow, an M.I.T. professor, won the 1987 Nobel Prize in Economic Sciences, and Joseph Brodsky, the Russian emigré poet, won the literature prize: Page A6.

Professors themselves are a threat to academic freedom today, scholars at a symposium in Texas suggested: Page A15.

Drexel University's president resigned after six months of fighting accusations of sexual harassment and poor leadership: Page A15.

The fees for Guaranteed Student Loans were increased as one of the first results of the new version of the deficit-reduction law: Page A25.

The financial plight of black colleges is helping them involve alumni in their institutions and raise money for new scholarships: Page A33.

Foreign enrollment in U.S. institutions reached a new high of 349,609 last year, helped mostly by an increase in Asian students: Page A36.

Virginia Tech's president has resigned in the wake of a long controversy over the emphasis of its athletics program: Page A37.

Unesco's new nominee for director-general, Federico Mayor Zaragoza, vowed a "thorough shakeup" of the U.N. agency: Page A41.

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South Africa Issues Stiff Rules to Check Unrest on Campuses

Academic leaders say the action will cut institutions' autonomy

By HELEN ZILLE

CAPE TOWN

Over the objections of most of South Africa's major universities, the government has issued stringent regulations requiring them to prevent campus unrest as a condition for receiving state subsidies.

The government's action, which had been expected, is regarded by academic leaders as potentially the most serious infringement of university autonomy in the country's history.

Under the regulations, announced by the Minister of National Education, F. W. de Klerk, as the academic year entered its final weeks, government subsidies accounting for 80 per cent of university budgets will be made contingent on steps by the institutions to enforce government-imposed restrictions on political activism and certain criminal offenses.

The rules were adopted despite strong opposition by many university officials to a draft that had been circulated for their reaction (*The Chronicle*, September 9).

The final version was virtually the same as the draft, except for the omission of a clause that would have prevented organizations from using university facilities if the groups were in a category that barred them from receiving foreign funds. The deleted provision would have prohibited the National Union of South African Students, an anti-apartheid organization of white students, from operating on any campus.

Although South Africa's so-called open universities—Rhodes University and the Universities of Cape Town, Natal, the Western Cape, and the Witwatersrand—welcomed the deletion, they condemned the regulations in general.

Robert Charlton, acting vice-chancellor

Continued on Page A45

The text of the South African government's regulations on campus unrest: Page A45.

EFFECTS ON CAMPUSES

Volatile Stock Market Threatens Gifts, Value of Pensions, Endowment Funds

- **One of the two top pension plans** for higher education suffered a major drop in value in last week's stock market crash, bringing renewed cries for more flexibility for participants: Page A22.
- **Large gifts to colleges,** as well as the momentum of recently announced capital campaigns, are threatened by violent swings in the stock market, fund raisers said: Page A22.
- **Some college endowments** took a severe beating in the falling market, but many were spared major losses because of conservative investment strategies they have pursued: Page A23.
- **Most foundation officials** discounted the possibility of curtailing grants in the near future, despite big stock losses endured last week. But the long-term outlook remains uncertain: Page A23.
- **An economist who predicted** a massive market panic in a best-selling book, *The Great Depression of 1990,* was much in demand by those seeking to unravel what happened and why: Page A3.

Land-Grant Institutions Take a Fresh Look at How They Treat 125-Year-Old Mission

By CAROLYN J. MOONEY

CLARK, S.D.

On an almost cloudless day at the county fairgrounds here, an administrator from South Dakota State University's Cooperative Extension Service has taken a break from his campus job to judge a dairy-cattle competition.

Today's 4-H "youth achievement day" is an important event for local youngsters, their parents, and the county cooperative-extension office, which is sponsoring the event. The scene probably hasn't changed much in the last few decades—the parade of calves into the show ring, the exhibits of nearly perfect red potatoes waiting to be judged inside a nearby barn, the tables of clothing and crafts made by children from farm families. Ranchers and grain farmers wander by, discussing the latest commodity prices and sampling homemade beef-barbecue sandwiches and cherry pie.

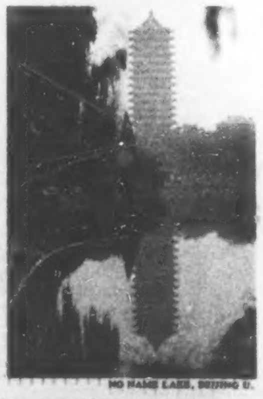
In this agricultural heartland, South Dakota State's role as a land-grant institution seems at first glance as cut-and-dried as the rectangular heaps of hay that lie side by side in the surrounding fields, baking in the sun like great brown loaves of bread. Like the 74 other colleges and universities established as land-grant institutions or given land-grant status since Congress passed the Morrill Act 125 years ago, South Dakota State was founded to "teach such branches of learning as are related to agriculture and the mechanic arts," and that is what it has been doing—particularly with agriculture.

But while the three-part land-grant philosophy of teaching, research, and public service is still very much alive here and in other states, change is coming—far more quickly for some land-grant institutions than for others, but inevitably for all. The future success of the system, insist political leaders and higher-education officials who follow it closely, depends on how well it reflects—and adapts to—change.

In another 10 years, predicts Robert T. Wagner, president of South Dakota State University, "I think this institution will be much more diverse. The kinds of things

Continued on Page A30

Black land-grant colleges have undergone dramatic changes to cope with the post-segregation era. Story on Page A31.



NO NAME LAKE, BEIJING U.

China's Leaders Plan to Upgrade Education Through Graduate Level

China's leaders are committed to a vast upgrading of education from the earliest years through graduate school. As part of that effort, they have begun to adopt some Western educational ideas. The first of a series of reports on higher education in China, based on a tour of 15 universities, begins on Page A40.

MARGINALIA

The Northern Virginia telephone book lists, under "United States Government," the "National Endowment For The Arts" followed by the "National Endowment For The Humanists."

■

Headline in the South Dakota State University newsletter, *Update:*

VIOLIST TO REFORM

"At last maybe he'll stop fiddling around," a reader suggests.

■

Sangamon State University's *SSU News* helpfully lists the daily specials in the campus cafeteria. For October 5, according to the *News*, it was "Southern Style Fried Children with Mashed Potatoes."

■

Note from the Associated Writing Programs at Old Dominion University:

Poet Lore is not published by The Writer's Center. All business and editorial correspondence should be sent to *Poet Lore*, The Writer's Center . . ."

Where they'll re-address it and send it on its way?

■

Headline in *Intercom*, a weekly publication at Pennsylvania State University:

UNIVERSITY ALUMNUS GIVES
$500,000 FOR SCHORLARSHIPS

And well he might.

■

From the minutes of a meeting of the faculty of the music department at Western Carolina University:

"The Franklin Shrine Concert having been postponed, the band is looking at a performance date in late spring. Dr. Holquist alerted the band faculty to avoid the April 23rd choral / orchestral concert with the Asheville Symphony."

Thanks for the tip.

■

Its masthead proclaims:

"*The Cleveland State University Quarterly* is published five times a year."

■

From a story in the Franklin and Marshall *College Reporter:*

"He claimed that first-semester freshmen who decide to pledge are no different grade wise than those who don't. However, in the second semester, those who are pledging 'have been found to have observable droppings in their GPAS.' "

No comment.

■

From the Miami *Herald:*

"Since the program took effect, the UF has funded 45 imminent scholars chairs."

All but dissertation? —C.G.

In Brief

Theology-School Official Admits Taking $269,000

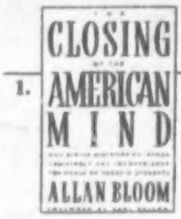
The business manager and controller at the School of Theology at Claremont has resigned after admitting he misappropriated $269,000 from the institution.

The manager, John W. Kirkman, said through his lawyer that he intended to make full restitution to the California institution. Mr. Kirkman had served as treasurer of the Pacific Conference of the United Methodist Church, which operates the school, from 1975 through 1982.

Officials said a claim had been filed with the school's insurance company, an action which could result in legal proceedings against Mr. Kirkman.

The school, which has 390 students, offers graduate degrees in religion and education. It is not formally connected with the Claremont Colleges group, but does share some joint faculty appointments in religion with the Claremont Graduate School.

What They're Reading on College Campuses



		Previous Survey
1.	The Closing of the American Mind, by Allan Bloom	1
2.	Billy and the Boingers Bootleg, by Berke Breathed	5
3.	It, by Stephen King	10
4.	Red Storm Rising, by Tom Clancy	4
5.	Calvin and Hobbes, by Bill Watterson	2
6.	Cultural Literacy, by E. D. Hirsch, Jr.	3
7.	School Is Hell, by Matt Groening	—
8.	Presumed Innocent, by Scott Turow	—
9.	Wanderlust, by Danielle Steel	6
10.	Necessary Losses, by Judith Viorst	—

The Chronicle's list of best-selling books was compiled from information supplied by stores serving the following campuses: Bucknell U., U. of California at San Diego, Carleton College, Carnegie Mellon U., Case Western Reserve U., Central Michigan U., Dartmouth College, Denison U., U. of Denver, Drake U., U. of Hawaii, Indiana U., U. of Iowa, Lawrence U., Lehigh U., Mankato State U., U. of Maryland–Baltimore County, U. of Missouri at Columbia, Montana State U., U. of Nebraska at Lincoln, New York U., U. of Notre Dame, Pennsylvania State U., U. of Pittsburgh, Portland State U., Princeton U., Southern Methodist U., U. of Southern Mississippi, Stanford U., Syracuse U., U. of Tennessee at Knoxville, Tulane U., Vanderbilt U., U. of Virginia, West Virginia U., Wichita State U., U. of Wisconsin at Madison, and U. of Wisconsin at Milwaukee.

Reports covered sales of hardcover and paperback trade books in September.

Racial Brawl Involves 40 at Fairleigh Dickinson U.

Fairleigh Dickinson University has suspended one student and banned another from its residence halls pending further investigation of their involvement in a racial brawl on the Teaneck-Hackensack campus two weeks ago.

Two students were treated at hospitals and released following the incident, which involved about 20 black and 20 white students, a university spokesman said.

The brawl began when the suspended student, Michael Rosa, smashed the window of a car driven by James Latney. Mr. Rosa, who is white, apparently mistook Mr. Latney or one of his two passengers, all of whom are black, for someone who had assaulted him earlier the same day, the spokesman said.

Mr. Latney was beaten by a crowd of white students when he got out of the car. He has been banned from the residence halls because allegedly he ran into a dormitory and picked up a clothes iron to use as a weapon.

The incident was the second race-related confrontation at the campus in six months. Robert H. Donaldson, the university's president, met last week with more than 300 students to discuss the incident, and appointed a committee to recommend ways to ease racial tensions on the campus.

Students in Drug Study Sue for $11-Million

A dozen medical and dental students at the University of Tennessee at Memphis who earlier this year participated in a study of an experimental new drug are suing its manufacturer for $11.2 million.

The lawsuit claims the company, Beecham Laboratories, did not adequately warn the participants of the drug's side effects. After the first dose, the students said they had suffered neurological disorders such as twitching muscles, tremors, and loss of body coordination and memory. A majority of the students were hospitalized, according to their lawyer, and the study was discontinued.

The lawsuit says the manufacturer knew the drug, an anti-depressant called Paroxetine, would result in such disorders but warned only that minor side effects, such as temporary drowsiness and insomnia, had been reported previously.

An official at Beecham denied the claims in the lawsuit.

'Star Wars' Scientist Files Grievance

A scientist who directed laser research for President Reagan's Star Wars program at the University of California's Lawrence Livermore National Laboratory has filed a grievance with the university, charging that his authority was undercut by two prominent researchers working there.

Roy D. Woodruff, a senior scientist at the laboratory who resigned two years ago as associate director for defense systems, wrote to David P. Gardner, president of the university, that Edward Teller, developer of the hydrogen bomb, and Lowell L. Wood, Jr., had "undercut my management responsibility for the X-ray laser program."

He said the two scientists also had "conveyed both orally and in writing overly optimistic, technically incorrect statements regarding this research to the nation's highest policy makers."

In addition, Mr. Woodruff charged in the grievance that Roger E. Batzel, the laboratory's director, had punished him for his dissenting views and denied him a pay increase.

Mr. Woodruff's grievance was filed April 3, but was made public only last week by the Southern California Federation of Scientists.

University officials said the grievance was still under review and that they could not comment on it.

Medical Schools Graduate Fewer Students in 1987

The number of medical-school graduates fell slightly in 1987, continuing the slow decline that began after the number of doctors graduating peaked in 1984, according to the Association of American Medical Colleges.

The 127 medical schools in the United States graduated 15,830 students this year, 287 fewer than in 1986. The number of women graduates, however, continued to

2 Converse Athletes Among 4 Killed when Truck Hits Team Bus

THOMAS E. MCCARVER

GAFFNEY, S.C.

A truck rammed a bus carrying the Converse College women's basketball team on a South Carolina highway last week, killing two players, the truck driver, and a security guard who was traveling with the team.

The bus was stalled in the highway's emergency lane when it was struck in the rear by the truck and sent rolling down an embankment. The truck careered down the highway, hit the security guard, an employee of the college who had left to get help for the bus, and then plunged down the embankment.

Eleven of the 16 passengers on the bus were thrown from it before it tumbled down the embankment, Tim Medley, a state trooper on the scene, said.

"When I got here there was nothing left but a chassis and seats," he added.

Four athletes, two in critical condition, were admitted to local hospitals. Eight other athletes and the coach, William Reitmeier, were treated for injuries and released.

The Converse team was returning from a scrimmage at North Carolina's Wingate College when the bus broke down. —D.L.

The Chronicle of Higher Education (ISSN 0009-5982) is published weekly except the last two weeks in August and the last two weeks in December, at 1255 Twenty-Third Street, N.W., Washington, D.C. 20037. Subscription rate: $50 per year ($51 if bill is to be sent). Second-class postage paid at Washington, D.C., and at additional mailing offices. Copyright © 1987 by The Chronicle of Higher Education, Inc. Printed in the United States of America. POSTMASTER: Send address changes to The Chronicle of Higher Education, P.O. Box 1955, Marion, Ohio 43305. Member, Audit Bureau of Circulations. The Chronicle reserves the right not to accept an advertiser's order. Only publication of an advertisement shall constitute final acceptance of the advertiser's order

Asians' Enrollment in U.S. Universities Up 8.8 Pct. in Year

NEW YORK

An 8.8-per-cent increase in the number of students coming from Asian countries to study in the United States helped bring the number of foreign students enrolled in American colleges and universities to a new high of 349,609 last year, according to the Institute of International Education.

But the number of foreign students taking undergraduate courses in this country continued to drop.

The rise in enrollments by Asian students—to a total of 170,700—offset a decline in the number of students coming to American colleges from developing countries in Latin America, Africa, and the Middle East, the institute's annual survey of foreign-student enrollment found.

Graduate Students Up 10 Pct.

The overall increase in the number of foreign students enrolled in the United States in 1986-87 was 1.7 per cent, up from 0.5 per cent the year before. Foreign-student enrollment as a proportion of the total student population of American colleges and universities has remained steady throughout the 1980's, at about 2.7 or 2.8 per cent, institute officials said.

The number of foreign students taking graduate courses rose by 10 per cent, to 146,100, the officials said, while the number taking undergraduate courses fell by 5.3 per cent.

Sixty-five per cent of the foreign students were enrolled at public institutions and 88 per cent at four-year colleges and universities. Male foreign students outnumbered females by 240,730 to 108,880.

Almost two-thirds of the foreign students relied on personal and family resources to cover the largest portion of their costs here. The number relying on employment in the United States as their primary source of money dropped 21 per cent, to 5,500, while the number depending on the institution at which they were enrolled to pay most of their costs increased by nearly a fourth, to 52,880.

21 Pct. in Engineering

Twenty-one per cent of the foreign students were enrolled in engineering courses, the institute's survey found. Business and management courses accounted for 19 per cent of foreign-student enrollment, followed by mathematics and computer sciences with 10 per cent and physical and life sciences with 8 per cent.

Taiwan sent the largest number of students, 25,660, but the biggest increase—43.3 per cent—was in the number of students from China, which stood at 20,030. Large numbers of students also came from Malaysia (21,640), South Korea (19,940), India (18,350), and Canada (15,700). The number of students from the Middle East declined by 10.8 per cent, to 47,000.

The institute's president, Richard Krasno, said record enrollments of students from Asian countries had come about because the students were "taking advantage of their expanding economies and governments' liberalized policies toward foreign study."

"At the same time," he said, "economic and political problems in the Middle East and other oil-dependent areas are making foreign study prohibitive for growing numbers of young people from those nations."

FACT FILE: Foreign Students in U.S. Institutions, 1986-87

Institutions with largest enrollments

Rank	Institution	Number of foreign students	Proportion of total enrollment
1.	Miami-Dade Community College	5,010	12.5%
2.	University of Southern California	3,746	12.2%
3.	University of Texas, Austin	3,000	6.5%
4.	Columbia University and Teachers College, and Barnard College	2,807	11.3%
5.	University of Wisconsin, Madison	2,789	6.7%
6.	Ohio State University, main campus	2,739	5.1%
7.	University of Minnesota, Minneapolis-St. Paul	2,624	6.6%
8.	University of California, Los Angeles	2,506	7.3%
9.	University of Michigan, Ann Arbor	2,449	7.0%
10.	Boston University	2,422	10.5%
11.	University of Arizona	2,393	7.9%
12.	Southern Illinois University, Carbondale	2,323	10.0%
13.	University of Houston, University Park	2,258	8.8%
14.	University of Illinois, Urbana-Champaign	2,228	6.1%
15.	New York University	2,196	6.9%
16.	Stanford University	2,187	17.7%
17.	Iowa State University	2,184	8.1%
18.	North Texas State University	2,164	10.2%
19.	George Washington University	2,163	14.5%
20.	University of Pennsylvania	2,125	12.5%
21.	University of Maryland, College Park	2,082	5.4%
22.	University of California, Berkeley	2,080	6.6%
23.	Harvard University	2,059	11.8%
24.	Michigan State University	2,051	4.8%
25.	State University of New York, Buffalo	2,041	17.0%
26.	Northeastern University	2,000	9.4%
27.	Indiana University, Bloomington	1,997	6.6%
28.	Howard University	1,993	18.0%
29.	Oklahoma State University, main campus	1,892	9.1%
30.	University of Miami	1,873	14.0%
31.	Cornell University	1,857	10.4%
32.	Massachusetts Institute of Technology	1,837	19.6%
33.	University of Iowa	1,826	6.2%
34.	Purdue University, main campus	1,788	5.5%
35.	University of Kansas	1,777	6.9%
36.	Arizona State University	1,752	3.9%
37.	Louisiana State University, Baton Rouge	1,735	6.3%
38.	California State University, Long Beach	1,726	5.0%
38.	University of Toledo	1,726	8.2%
40.	Texas A&M University, main campus	1,672	4.6%
41.	University of Oregon, main campus	1,670	9.7%
42.	Pennsylvania State University, main campus	1,662	4.7%
43.	University of Southwestern Louisiana	1,652	10.1%
43.	University of Washington	1,652	4.9%
45.	University of Florida	1,589	4.5%
46.	Oregon State University	1,559	10.3%
47.	Southern University and A&M College, main campus	1,500	15.7%
48.	Northern Virginia Community College	1,481	4.4%
49.	University of Massachusetts, Amherst	1,462	5.4%
50.	University of Missouri, Columbia	1,412	6.2%
51.	American University	1,404	14.7%
52.	City University of New York, City College	1,400	11.6%
53.	Brigham Young University	1,399	4.9%
54.	San Francisco State University	1,381	5.3%
55.	Syracuse University, main campus	1,374	6.5%
56.	Temple University	1,358	4.4%
57.	Ohio University, main campus	1,344	8.7%
58.	University of Hawaii, Manoa	1,341	7.8%
59.	University of Pittsburgh, main campus	1,337	4.7%
60.	Rutgers University, New Brunswick	1,326	3.7%
61.	University of Illinois, Chicago	1,304	5.3%
52.	University of Texas, Arlington	1,284	5.5%
63.	State University of New York, Stony Brook	1,257	8.7%
64.	Virginia Polytechnic Institute and State University	1,251	5.6%
65.	Georgetown University	1,221	10.2%
66.	Wayne State University	1,220	4.8%
67.	University of Oklahoma, Norman	1,197	5.8%
68.	University of the District of Columbia	1,181	10.1%
69.	Texas Southern University	1,142	13.4%
70.	Georgia State University	1,132	5.2%
71.	Texas Tech University	1,129	4.2%
72.	University of Georgia	1,124	4.4%
73.	North Carolina State University	1,107	4.5%
74.	California State University, Los Angeles	1,105	5.3%
75.	New Jersey Institute of Technology	1,076	14.2%
76.	Western Michigan University	1,053	4.8%
77.	University of Utah	1,044	4.2%
78.	Eastern Michigan University	1,036	4.9%

Distribution by field of study

Field of study	1985-1986		1986-1987	
	Number of foreign students	Proportion of foreign students	Number of foreign students	Proportion of foreign students
Agriculture	7,400	2.1%	7,200	2.1%
Allied health	3,200	0.9%	3,000	0.9%
Architecture & environmental design	6,540	1.9%	5,950	1.7%
Area & ethnic studies	830	0.2%	920	0.3%
Business & management	64,970	18.9%	66,140	18.9%
Communications	4,310	1.3%	4,890	1.4%
Communications technologies	590	0.2%	720	0.2%
Computer & information sciences	27,910	8.1%	27,080	7.7%
Education	11,680	3.4%	12,130	3.5%
Engineering	74,580	21.7%	74,290	21.3%
English language	12,870	3.7%	13,530	3.9%
Foreign languages	2,790	0.8%	3,230	0.9%
Health sciences	10,680	3.1%	11,350	3.2%
Home economics	1,980	0.6%	1,850	0.5%
Industrial arts	890	0.3%	820	0.2%
Law	1,650	0.5%	2,020	0.6%
Letters	5,190	1.6%	5,480	1.6%
Liberal & general studies	10,470	3.0%	11,160	3.2%
Library & archival sciences	690	0.2%	770	0.2%
Life sciences	10,040	2.9%	9,920	2.8%
Mathematics	8,000	2.3%	8,360	2.4%
Military sciences	130	—	210	0.1%
Multi/interdisciplinary studies	2,090	0.6%	2,000	0.6%
Parks & recreation	230	0.1%	250	0.1%
Personal & social development	1,360	0.4%	1,970	0.6%
Philosophy & religion	1,390	0.4%	1,720	0.5%
Physical sciences	15,630	4.6%	16,310	4.7%
Protective services	470	0.1%	610	0.2%
Psychology	3,260	1.0%	3,310	0.9%
Public affairs	2,700	0.8%	2,920	0.8%
Science technologies	1,160	0.3%	1,140	0.3%
Social sciences	17,220	5.0%	17,600	5.0%
Theology	2,540	0.7%	2,770	0.8%
Visual & performing arts	7,970	2.3%	8,050	2.3%
Vocational home economics	270	0.1%	260	0.1%
Undeclared	20,100	5.9%	19,680	5.6%
Total	343,780	100.0%	349,609	100.0%

Where they come from

Rank	Country or territory	Students	Rank	Country or territory	Students
1.	Taiwan	25,660	33.	Egypt	2,100
2.	Malaysia	21,640	34.	Peru	2,080
3.	China	20,030	35.	Spain	2,050
4.	Republic of Korea	19,940	36.	Cyprus	2,010
5.	India	18,350	37.	Italy	2,000
6.	Canada	15,700	38.	Ethiopia	1,960
7.	Japan	15,070	38.	South Africa	1,960
8.	Iran	12,230	40.	Bangladesh	1,930
9.	Nigeria	11,700	41.	Norway	1,920
10.	Hong Kong	11,010	42.	Sri Lanka	1,890
11.	Indonesia	9,240	42.	Syria	1,890
12.	Thailand	6,480	44.	Nicaragua	1,840
13.	Lebanon	6,450	45.	Panama	1,770
14.	United Kingdom	6,240	46.	Kenya	1,760
15.	Pakistan	5,950	47.	Pacific Is. Trust Terr.	1,710
16.	Saudi Arabia	5,840	48.	Bahamas	1,530
17.	Jordan	5,650	49.	Sweden	1,510
18.	Mexico	5,330	50.	Netherlands	1,490
19.	West Germany	5,090	51.	Argentina	1,470
20.	Venezuela	4,870	51.	Australia	1,470
21.	Singapore	4,530	53.	Haiti	1,420
22.	Philippines	4,250	54.	Cuba	1,350
23.	Greece	4,240	55.	Cameroon	1,330
24.	France	3,910	56.	United Arab Emirates	1,270
25.	Colombia	3,740	57.	Honduras	1,200
26.	Kuwait	3,250	58.	Ghana	1,150
27.	Brazil	2,760	59.	Iraq	1,130
28.	Vietnam	2,700	60.	El Salvador	1,120
29.	Israel	2,630	61.	Chile	1,090
30.	Turkey	2,490	62.	Ireland	1,070
31.	Jamaica	2,300	63.	Ecuador	1,050
32.	Trinidad & Tobago	2,150	64.	Switzerland	1,020

Note: Includes only countries with over 1,000 students in U.S. institutions.

Number of foreign students by state

1.	California	47,388	14.	Oklahoma	7,133	27.	Colorado	4,184	40.	West Virginia	1,211
2.	New York	32,821	15.	Maryland	6,230	28.	Tennessee	4,091	41.	New Hampshire	1,186
3.	Texas	25,125	16.	Washington	6,032	29.	Alabama	3,997	42.	North Dakota	1,009
4.	Massachusetts	18,227	17.	Arizona	6,008	30.	Connecticut	3,937	43.	Idaho	889
5.	Florida	18,185	18.	Iowa	6,001	31.	Utah	3,934	44.	South Dakota	749
6.	Illinois	14,505	19.	Virginia	5,983	32.	Hawaii	3,415	45.	Vermont	710
7.	Ohio	12,834	20.	Missouri	5,976	33.	South Carolina	2,030	46.	Delaware	703
8.	Michigan	12,219	21.	Wisconsin	5,778	34.	Nebraska	1,929	47.	Montana	650
9.	Pennsylvania	12,201	22.	Oregon	5,740	35.	Arkansas	1,846	48.	Nevada	589
10.	District of Columbia	9,722	23.	North Carolina	5,669	36.	Kentucky	1,739	49.	Wyoming	461
11.	New Jersey	8,363	24.	Georgia	5,643	37.	Rhode Island	1,709	50.	Maine	452
12.	Louisiana	7,836	25.	Minnesota	5,157	38.	Mississippi	1,697	51.	Alaska	264
13.	Indiana	7,135	26.	Kansas	4,996	39.	New Mexico	1,600			

SOURCE: INSTITUTE OF INTERNATIONAL EDUCATION